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Volume 94
2001

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ISSN 0007-0335

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British Birds

January 2001 Vol.94 No.1



Shifting sands: taxonomic changes

Waders with non-breeding plumage in summer

Roof assemblies of plovers

British Birds

Established 1907, incorporating *The Zoologist*, established 1843

Published by BB 2000 Limited, trading as 'British Birds'
Registered Office: 4 Henrietta Street, Covent Garden, London WC2E 8SF

ISSN 0007-0335

British Birds

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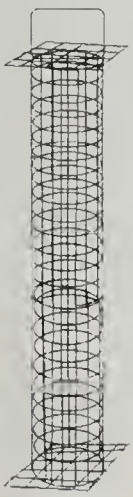
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Shifting sands:

taxonomic changes in the world of the field ornithologist

Martin Collinson



Alan Harris

Blue-headed Wagtail *Motacilla f. flava* stretching

ABSTRACT Species definitions have been extensively debated recently in the scientific and popular ornithological literature, and many taxonomic changes have been proposed. This leads to a number of questions and much confusion for ornithologists and for birdwatchers in general. This paper looks at some of the issues around which the 'species debate' centres, with particular reference to birds in the Western Palearctic. While offering no definitive answers, it aims to make the arguments accessible to a wider audience, to place in context the bewildering number of taxonomic changes currently being proposed, and to suggest reasons why this situation may have arisen, and ways in which the non-specialist may cope. The 'species question' may be broken down into two different questions, with very different answers: what is a species, and how in practice do we recognise one? After a very brief explanation of species concepts, it is concluded that the species is a real biological entity, although it is not always recognisable as such. The dynamics of bird evolution in relation to environmental change are reviewed, and it is considered that taxonomic uncertainty is inevitable. Taxonomy is fundamental to conservation, and classification of Western Palearctic birds must reflect this.

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Introduction

In recent years, there has been much debate over just how one should define a species. Various opinions do not always coincide, and numerous new taxonomic changes and varied arrangements have provoked extensive discussion and, often, a great deal of disagreement. For many, the problems of understanding what lies behind all the arguments may prevent an objective conclusion being reached. This paper attempts to clarify some of these issues, although it is inevitable that disagreement will persist among taxonomists. I have tried to avoid the use of technical terms; where their use was unavoidable, however, such terms have been explained, so far as is possible, within the text. Definitions of the most important terms are repeated in a glossary (page 27).

So, just what *is* a species? Geographical variation within bird species is one of the joys of field ornithology. Wherever one goes in the World there are new challenges and questions posed, even by seemingly familiar species. The way in which species have been defined in the past, however, may not be the most accurate, objective or useful, and re-examinations of species concepts have occurred *ad nauseam* in the recent biological literature. It would seem opportune to put a little perspective into the problem for the average, non-specialist, birdwatcher who sees his or her potential list of 'species seen' rising almost monthly with every bird magazine which drops through the letterbox.

In 1859, in *The Origin of Species*, Charles Darwin famously sidestepped the species question: 'Nor shall I here discuss the various definitions which have been given of the term species. No one definition has as yet satisfied all naturalists; yet every naturalist knows vaguely what he means when he speaks of a species.'

In his conclusion, however, Darwin felt that the adoption of evolutionary theory would resolve many taxonomic arguments: 'Systematists will be able to pursue their labours as at present; but they will not be incessantly haunted by the shadowy doubt whether this or that form be in essence a species. This I feel sure, and I speak after experience, will be no slight relief. The endless disputes whether or not some fifty species of British brambles are true species will cease.'

Darwin's optimism may have been ill-founded. If his 'fifty species of British brambles' is substituted with 'eighteen races of yellow wagtail', it may seem that the search for a satisfactory species definition is going around in circles. Yet this is to belie the advances in biological knowledge which have had an impact on taxonomy in the last 150 years; whereas there are still no universally accepted species-defining criteria, at least we are now better informed as to why this is so.

Species definitions as they relate to birds

Although the word 'species' is used primarily in a biological context, it is really only a vague term used to bunch together a group of entities which share the same characteristics; one can still catch geologists talking about 'species' of rock. In biology, the concept of the species is a consequence of the fact that it is possible to name and describe discrete groups of organisms on the basis of their shared morphological characteristics and a tendency to 'breed true'. Different species look or sound different. Thus,



Robin Chittenden

1. Sykes's Wagtail *Motacilla flava beema*, adult male, Norfolk, May 1994.

Willow Warblers *Phylloscopus trochilus* look like other Willow Warblers, and breed with those to produce more Willow Warblers, distinctly different from Common Chiffchaffs *P. collybita*, which mate with other Common Chiffchaffs to produce more of the same. It is popularly accepted that the species, uniquely in the Man-made hierarchy of classification, represents a real biological entity (e.g. in Gill 1990).

Back to basics: species concepts

Darwin was, of course, right. We do know vaguely what we mean when we speak of a species. Broadly, species represent the lineages (single lines of direct ancestry and descent) produced when we draw evolutionary trees (de Queiroz 1998). When drawing such a tree, as illustrated by that for *Oxyura* ducks (fig. 1), for example, one is trying to produce a graphical description of the species' evolution.

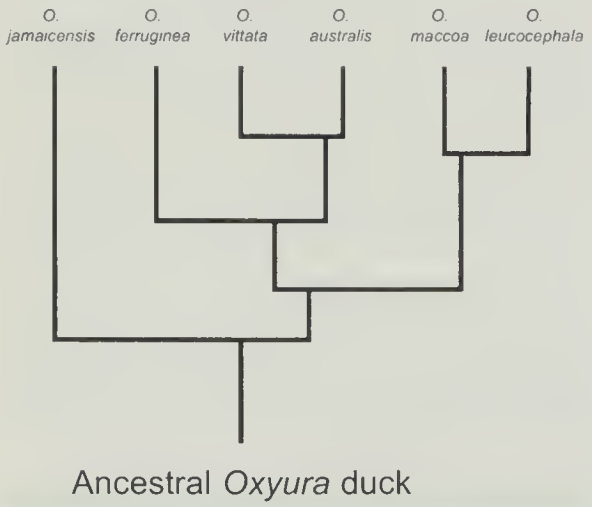


Fig. 1. Genealogical relationships among *Oxyura* ducks: Ruddy *O. jamaicensis*, Andean *O. ferruginea*, Lake *O. vittata*, Blue-billed *O. australis*, Maccoa *O. maccoa* and White-headed Ducks *O. leucocephala*.
From data presented in Livezey (1995).

Each line in the above type of diagram (fig. 1) represents a population of birds in which all the individuals are actually or potentially interbreeding (a reticulate genealogy), and the forking represents the divergence into two populations which do not interbreed (a divergent genealogy). The lines which represent species are better thought of not as lines, but as cylinders which contain, at any one point in time, all the living individuals of the species. This parsimonious and simplified representation ('lineage concept' of the species) is the tacit evolutionary assumption which underlies all the other species concepts, which in essence, therefore, differ only in the criteria by which they try to define a species.

Species definitions can be divided into two groups (fig. 2). The first of these cuts the evolutionary tree across the horizontal, with species being regarded as the different extant groups of organisms at the tips of the branches (fig. 2a): i.e. individuals from the same species look alike, share a gene pool, and recognise each other as mates, but are different from individuals in other species, possibly occupying different niches in the environment, etc. Such are the 'Biological (Isolation)', 'Cohesion', 'Recognition', 'Genetic Cluster', 'Phenetic' and 'Ecological' species definitions. These take the species as a cross-section of a lineage which is evolving through geological time, but do not include this evolutionary knowledge in the primary species criteria, choosing to use the present-day reproductive and ecological biology of the organisms being classified.

The other group of species definitions – Phylogenetic, Evolutionary and Genealogical – looks at the species in the vertical (time) axis, as organisms which are evolving independently as lines on the evolutionary tree. They recognise that there are all sorts of ecological and behavioural events taking place in the present day, but they do not include this knowledge in the primary species criteria, choosing instead to concentrate on the organisms' historical evolution with respect to related forms.

I shall discuss the 'Biological' (fig. 2b) and 'Phylogenetic' (fig. 2c) definitions of the species, respectively, as the main subjects of this review, although keen readers will spot allusions to the other species concepts that fall within their broader boundaries.

The Morphological Species Concept

Attempts to define species pre-date any understanding of evolution or genetics, and in practice most species have, until surprisingly recently, been classified under what has been described as the Morphological Species Concept (Haffer 1992).

'A species is a community, or a number of related communities, whose definitive mor-

phological characteristics are, in the opinion of a competent systematist, sufficiently definite to entitle it or them to a specific name.' (Carter 1951, after Regan).

Under a morphological definition, everything hinges on what is a 'competent systematist'. If, in a hypothetical situation, specimens of an unusual bunting *Emberiza* were brought back to a museum from an expedition, a competent systematist would be someone who knew a lot about buntings and their distribution, who was familiar with all the described species, and who knew how much variation he could expect to find within those species. If he was confident, after due consideration, that the specimens fell outside the definition of any known species of bunting on the basis of a number of characteristics, and if there was no overwhelming evidence that they interbred and merged with any known species, then he would classify them as 'new'. Essentially, this defines new species purely on the basis of their degree of physical similarity to any other species of which the taxonomist is aware.

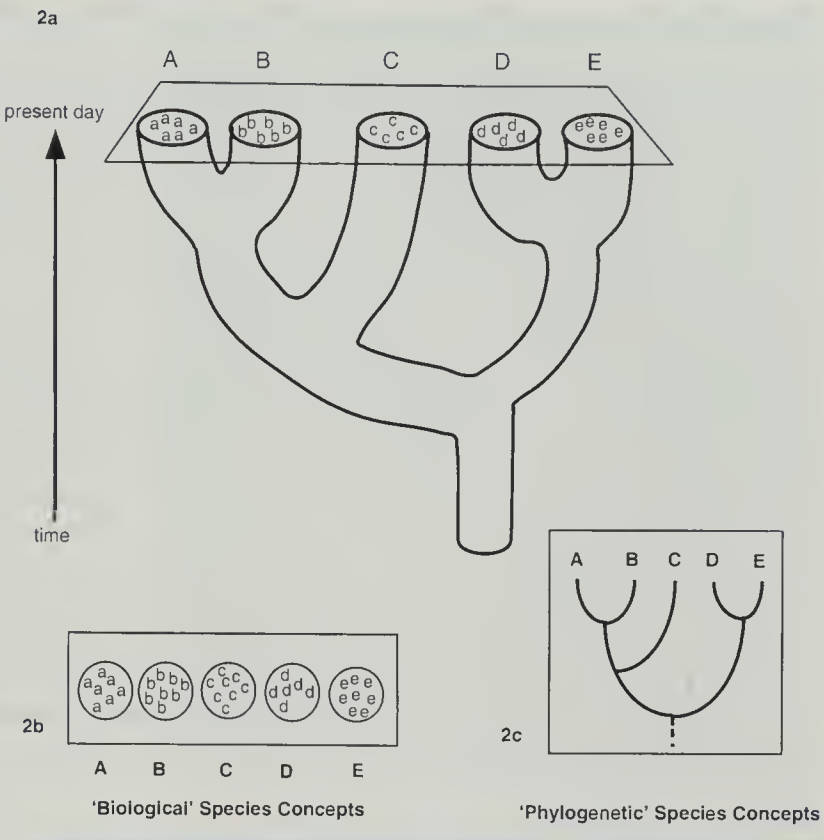


Fig. 2. 'Horizontal' and 'Vertical' species definitions.
Fig. 2a is a fleshed-out version of an evolutionary tree, describing the genealogy of five closely related species (A, B, C, D and E); it emphasises that each lineage is, at any one time, a population of individuals which represent the species. As described in the text, different philosophies for defining a species cut this tree either across the horizontal (the present day) (2b: each lower-case letter represents the individuals that comprise the species) or up the vertical time axis (2c).

By this methodology, there is inevitably a large degree of subjective input on the part of the taxonomist classifying organisms, and a reliance on his 'authority' to make the classification stick. There is not necessarily any reference to the behaviour or the ecology of the birds in question. Many forms of bird which have been recognised and named by 'competent systematists' are only marginally different from their neighbouring populations; without the systematist knowing it, they could be only the *described* forms in a swarm of intermingling but insufficiently documented populations (Knox 1994a).

Attempts to classify animals as species or subspecies purely on the basis of their physical similarities with each other are flawed: there is no absolute correlation between the degree of physical similarity of two animals and their biological interactions or evolutionary relatedness (Burkhardt 1987; Carter 1951; Knox 1994b). Even without complications (e.g. discrete polymorphism or convergent evolution), which are easily dealt with on a case-by-case basis, it is possible to find examples of birds which are very closely related, yet which superficially look very different, and, conversely, of animals which to us appear almost identical, yet which are true and divergent species in every definition of the word ('cryptospecies') (Cain 1954; Dobzhansky 1937; Kaiser 1988). Morphological distinctiveness is not a sure criterion of specific difference in any biological sense, since some of the differences between geographically separated populations of the same species are a passive result of environmental, not genetic, factors (James 1983). Morphological variation within a species is very much the norm, not the exception (e.g.

Byrkjedal & Thompson 1998; Coleman 1979; Knox 1994a; Wynne-Edwards 1948), and the fact that different *species* of bird, such as the Blue Tit *Parus caeruleus* and the Great Tit *P. major*, look different is the symptom of a set of principles, explored below, within which lie the bases for defining a species.

Morphological criteria can be very easily used to define divisions within a geographically varying population of birds. The work of the 'old-school' morphological taxonomists has immense and lasting value, but it has proven impossible to provide a meaningful categorisation of species on morphological grounds without reference to either the phylogeny or the reproductive biology of the species concerned.

There are two separate questions involved when attempting to answer the species problem: the first is 'What is a species?' (the species concept), and the second is 'How do we recognise one?' (the species criteria). The Morphological Species Concept makes no real attempt to answer the first of these, and is thus not a species concept at all.

The Biological Species Concept: the BSC

The biological species is variously described in terms of the ability of its individuals to interbreed and to maintain the integrity of the species. It rests explicitly on the concept of 'reproductive isolation' and the fact that different species do not normally interbreed freely. Often, two different species are physically incapable of interbreeding, or they can interbreed but do not do so; at other times, two species may be able to interbreed (as with a Tufted Duck *Aythya fuligula* and a Common Pochard *A. ferina*), but hybridisation is rare, or the hybrids are infertile or unfit.

'A species is a population of organisms which do, or potentially can, interbreed freely, reproductively isolated from other such populations' (Mayr 1949).

'A species is the largest and most inclusive reproductive community of sexual and cross-fertilising individuals which share a common gene pool' (Dobzhansky 1950).

Diagnosably different taxa of birds are classically distinct biological species if they have widespread opportunity or potential to interbreed, but do not freely do so and, hence, do not merge over time into one species. It must be empirically shown, or deduced from observation, that there are or would be significant factors (behavioural or physiological) preventing the free exchange of genes between the two species, such that they are expected never to merge.

The BSC examines the biological reasons why we think that living things organise themselves into discontinuous entities which we recognise as that vague thing called a species (which everybody understands, but no-one can define). Ernst Mayr proposed a

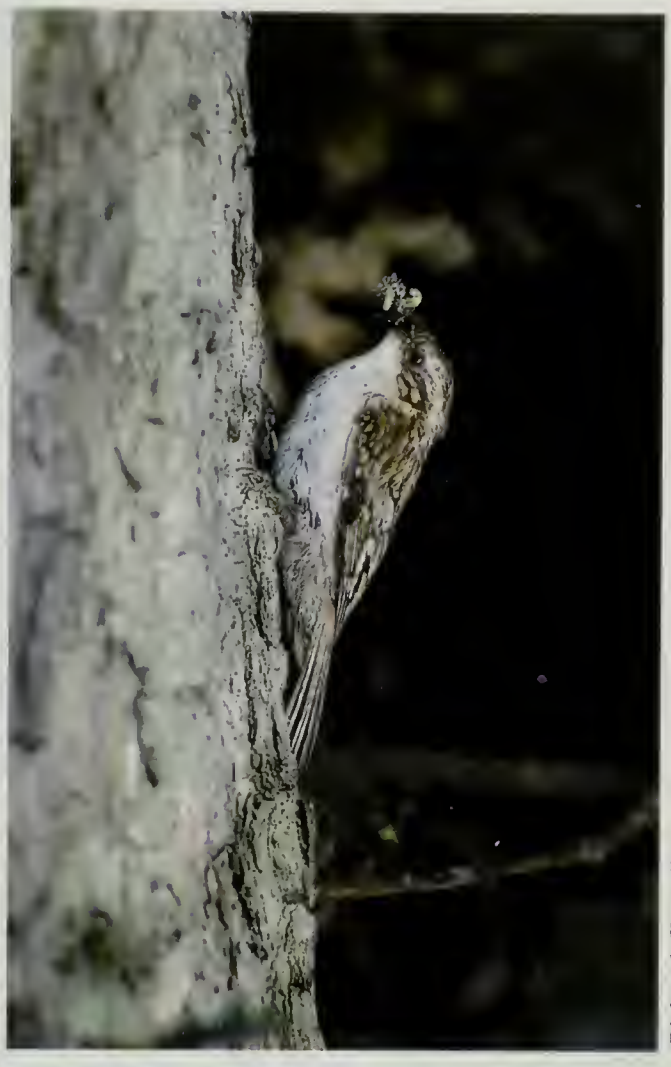


Robin Chittenden

2. Tufted Duck *Aythya fuligula* × Common Pochard *A. ferina* hybrid, Norfolk.

thought experiment along these lines to explain it:

'It is quite possible to think of a world in which species do not exist, but are replaced by a single reproductive community of individuals, each one different from every other one, and each one capable of reproducing with those other individuals that are most similar to it. Each individual would then be the centre of a concentric series of circles of genetically more and more unlike individuals. What would be the consequence of the continuous uninterrupted gene flow through such a large system? In each generation, certain individuals would have a selective advantage because they have a gene complex that is specially adapted to a particular ecological situation. However, most of these favourable combinations would be broken up by pairing with individuals with a gene complex adapted to a slightly different environment. In such a system there is no defence against the destruction of superior gene combinations except the abandonment of sexual reproduction. It is obvious that any system that prevents such unrestricted outcrossing is superior.' ... 'The segregation of the total genetic variability of nature into discrete packages, so called species, which are sep-



Richard Chandler

3. Eurasian Treecreeper *Certhia familiaris*, Greater London, July 1978.

Case study

The definition of the species in biological terms can be straightforward in cases where two well-defined taxa are living side by side in the same ecosystem. It also works rather well in cases where two species inhabit adjacent or slightly overlapping areas. One example, often cited, is that of the Eurasian Treecreeper *Certhia familiaris* and the Short-toed Treecreeper *C. brachydactyla*. These two are very closely related, with similar life histories, yet with diagnostic morphological differences and different feeding strategies (Osiejuk 1998). They hybridise very rarely, if ever, and with good reason. In continental Europe, where both live, they differ in the woodland types which they prefer and are in broad terms separated, with Eurasian Treecreeper in upland montane areas and Short-toed in lowland woods. It is assumed that morphological and behavioural differences are responsible for making these potentially competing species 'better fit' for their respective habitats, and there is a stand-off between the two, making hybridisation undesirable for the same reasons as described on page 8 for the *Parus* tits. The rather different songs of the two treecreepers must be important in species recognition, and form part of a pre-mating isolating mechanism. Playback experiments have shown that, in the zones where the two species meet, the Short-toed Treecreeper exhibits a more vigorous aggressive response to the song of Eurasian than it does in areas where the two do not meet, providing further evidence of the competitive nature of the interaction between them (Gil 1997). Unlike the situation with the tits, the treecreepers are good biological species that are not sufficiently ecologically distinct to allow them to breed in full and general sympatry (i.e. by occupying different niches in overlapping territories in the same woodland).



Richard Chandler

4. Blue Tit *Parus caeruleus*, Greater London, February 1991.

arated from each other by reproductive barriers, prevents the production of too great a number of disharmonious incompatible gene combinations. This is the basic biological meaning of species and this is the reason why there are discontinuities between sympatric species.' (Mayr 1949, 1996)

Fifty years on, Mayr's explanation seems dated, and a somewhat circular justification for why species exist. The teleological idea that evolution is directed purposefully has been firmly refuted. Mayr's ideas are a *starting point* for defining how natural selection acts on individuals and makes organisation into species advantageous.

The BSC is in practice intertwined with the concept of the ecological niche. This has to be so, since numerous mathematical models and empirical examples have shown that organisms which have the same ecological requirements, and are in strong (reciprocating) competition, usually cannot co-exist in the same place at the same time (i.e. in sympatry); one tends to drive the other to local extinction (Chapman 1931; Colinvaux 1993; Gause 1934; Lotka 1925). Deciduous woodlands in western Europe, for example, are inhabited by both Blue Tits and Great Tits. These species can, on the basis of their morphology, genetics (Slikas *et al.* 1996), vocalisations and behaviour, be shown to be quite closely related, but they occupy quite distinct, albeit similar, niches in the woodland ecosystem. They eat broadly the same types of food, and are in competition for nest sites, but there are definite differences in their foraging behaviour and food preferences which separate them from each other as ecological entities, and which reduce the competition between them for resources (Gibb 1954, in Perrins 1974). For all *Parus* tits, it is likely that size differences and feeding-site preferences are the major factors which enable the different species to occupy different niches in the same wood. If Blue and Great Tits were to hybridise, we can conjecture that the offspring may have many characters (e.g. body size, bill length) intermediate between the two parental forms. These offspring would be in competition with, and inferior to, both sets of parental species, and, all things being equal, would soon die under harsh environmental conditions. Blue and Great Tits which mate only with their own kind are likely to be more successful, by not wasting their breeding efforts raising unfit youngsters; there are, therefore, selective advantages for the evolution of behavioural (different songs and display) and genetic barriers which prevent interbreeding. Reproductive isolation is a result of the need to remain ecologically separated, by the maintenance of genetic and, hence, morphological differences by which



Richard Chandler

5. Great Tit *Parus major*, Dorset, April 1991.

we *recognise* different species.

Accessible reviews on niche separation among closely related species can be found for crossbills *Loxia*, in which bill size is tightly linked to feeding efficiency on different cone species, and Galapagos ground finches *Geospiza*, where ecological separation is dependent on bill measurements and body size (Benkman 1993; Knox 1990; Lack 1947; Weiner 1995).

So, discrete species are maintained because different birds need either to parcel out different habitats or to find different ecological niches in the same habitat. Mechanisms which prevent gene flow between different types of bird allow this to happen. Reproductive isolation between two species is occurring if (1) the production of hybrids is prevented or (2) hybrids are produced, but are unfit, are less fertile or cannot attract mates.

Prezygotic vs postzygotic reproductive isolation, and why the 'High School' species definition is wrong

With prezygotic isolation, successful fertilisation does not happen because mating does not occur, or the egg and sperm are not compatible. With postzygotic isolation, fertilisation occurs, but the resulting hybrids are infertile, inviable or unfit.

Birds are sophisticated animals, and for many species much or all of the important reproductive behaviour by which they attempt to get a mate of their own species is acquired culturally (Grant & Grant 1997; Price 1998; Thielcke & Zimmer 1986). Much of a bird's vocalisation patterns is genetically programmed, but for many species, especially passerines (references in Gill 1990), chicks may imprint on their father's song, and either mimic it when they grow up (males) or mate with males which sing a similar song; they certainly look at their parents and siblings (when available) to determine what their potential mates should look like. Because of this, reproductive isolation of a new 'protospecies' could happen very quickly and in the absence of very much genetic change. A subpopulation of birds which, isolated from the main range of the species, develops small changes in song or plumage aberrations may find that its offspring, through imprinting, no longer recognise individuals of the ancestral 'type' of the species as potential mates if they come back into contact. Thus, prezygotic reproductive isolation may occur as a result of subtle and non-adaptive changes in plumage or song. This has led some observers to assume that a pre-mating barrier is the normal method of development of reproductive isolation during bird speciation, with the chromosomal changes which may make hybrids

sterile occurring only much later, and almost incidentally (Dobzhansky 1935; Mayr 1988). Subtle changes of song have been implicated, for example, in reinforcing the reproductive isolation among species of chiffchaff *Phylloscopus collybita, P. brehmii, P. canariensis* and *P. sindianus* (Clement & Helbig 1998; Helbig *et al.* 1996; Salomon 1989; Salomon & Hemim 1992).

The 'High School' definition, that two animals belong to the same species if they can interbreed and produce fertile young, is inaccurate: many birds which are not of the same species can do this (e.g. Lesser Black-backed Gull *Larus fuscus* and Herring Gull *L. argentatus*) (see Mayr 1963). The essence of the biological species definition is not whether two 'species' produce fertile young when they meet in the wild, or even if they can do so under artificial experimental conditions. The ability to produce fertile young in a hybrid cross is a primitive characteristic, partly a consequence of the chromosomal number and composition of the two parents. Chromosomal imbalance can isolate two taxa if it makes hybrids inviable or infertile, but there is no absolute correlation between the chromosomal similarity of two species and their closeness of descent (Carter 1951). Closely related species may have vastly different chromosomal characteristics; but, equally, two more distantly related species, whose morphology and behaviour are very different, *may* be able to produce fertile hybrid young because events such as chromosome and gene rearrangements have, by good fortune, never occurred (Stebbins & Day 1967, in Tokeshi 1999).

Prezygotic reproductive barriers are the most energy-efficient means of restricting gene flow, since they ensure that birds of different species do not waste time and resources in courting, and in incubating hybrid eggs or raising hybrid young. Postzygotic reproductive isolation can, however, be just as effective in preventing different species from merging in spite of frequent hybridisation. Behavioural and physical adaptations which prevent interbreeding are not perfect (Bell 1996), and at least 10% of the World's bird species have been shown to hybridise with others in the wild, often producing fertile young (Grant & Grant 1992, 1997). Postzygotic maintenance of the biological species relies on the hybrid youngsters usually (there are exceptions) being at a selective disadvantage, being not so fertile as their parents or being less able to attract mates, such that hybrids are preferentially eliminated from the population. Hybrid zones are not uncommon, maintained by some sort of balance between the production of hybrids by interbreeding and their subsequent poor viability or breeding performance (Barton & Hewitt 1985). While fertile hybrids can facilitate limited introgression of the genomes of two biological species, this need not threaten the separate identities of the two or their ability to follow separate evolutionary paths (Mayr 1996). This is why the 'High School' definition of the species is unacceptable.

Problems with allopatry

The big problem with the Biological Species Concept is that there is no satisfactory way of dealing with closely related taxa which never meet in the wild: e.g. sedentary island populations of a species which is widely distributed on a nearby continent or adjacent islands, and where there is no migration by which the separate populations may come into contact. For example, British forms of the Willow Grouse *Lagopus lagopus scoticus* ('Red Grouse'), the Black Grouse *Tetrao tetrix britannicus* and the Ptarmigan *Lagopus mutus millaisi* have been isolated from their continental congeners since Britain was cut off from the rest of Europe by sea-level rise following the last glaciation. Geographical isolation inevitably leads to genetic and, hence, morphological divergence from the ancestral stock (obviously so in the case of Red Grouse).

There is no way of knowing whether the genetic and cultural differences between geographically separated populations of a species have arisen by chance and are selectively neutral (i.e. have no effect either way on the fitness of the bird), or whether they are sophisticated adaptations to the subtly different environmental parameters which the isolated population faces. Whether or not the differences are adaptive in terms of fitness, there is no pressure for the separate populations to evolve mechanisms to avoid hybridisation: the opportunity for hybridisation never arises. It may be that the differ-

ences affect their ability to hybridise (e.g. through plumage, imprinting or behavioural differences making them sexually unattractive to each other), but this is a matter largely of chance, and experimentally untestable: the BSC cannot define the two forms with respect to each other.

In short, when two closely related taxa are absolutely separated geographically, with no way of determining whether hybridisation between the two in the wild is either possible or disadvantageous, there is no scientifically sound method of classifying them with respect to each other under the terms of the BSC. In such cases as these, the conventional approach of taxonomists using the BSC is to make a subjective judgment (Knox 1994b), based on differences between the two sets of birds in morphology, genetics, ecology or reproductive behaviour, as to what would happen if the two forms, such as Red Grouse and Willow Grouse, were to come into contact again in the future. To a first approximation, if it is judged that they would hybridise freely and merge, they are classified as subspecies; if not, they are classified as separate species. The difficulty with this is that it relies upon a 'competent systematist' to assess potentially biologically significant differences in the absence of any hard evidence, and in an entirely hypothetical situation. It is very unsatisfactory.

The Phylogenetic Species Concept: the PSC

Supporters of the PSC argue that any species definition, to be useful, must recognise that species are a product of their evolutionary history, and that their classification must primarily recognise this history, rather than any current biological relationships between different taxa (Sangster 2000; Sangster *et al.* 1998). There are several variants of the PSC, but that of Cracraft (1983) is commonly used by birders:

'A species is the smallest diagnosable cluster of individual organisms within which there is a parental pattern of ancestry and descent.'

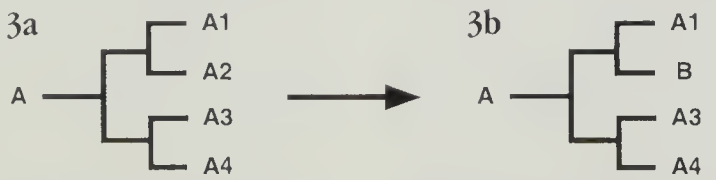
The premise of the PSC is that each branching in a phylogenetic tree such as that presented in fig. 1 (on page 4) is a speciation event, *and that it does not matter whether the species are prevented from merging back into each other by biological factors (e.g. reproductive isolation) or geographical factors (e.g. they do not normally meet in the wild).* Each line of birds which reaches the 'top of the page' is an extant species. The PSC also makes no prediction about what may happen to the species in the future. According to the PSC, species are basal taxa, and the subspecies is not recognised (Cracraft 1987); the proper taxonomic framework for counting biological diversity resides with taxa of species rank, not with subspecies as required by the Biological Species Concept (Cracraft 1992).

The evolutionary divergence of one lineage of a bird into two non-interbreeding lineages (the phylogenetic split) will not always be coincident with the evolution of the reproductive isolating mechanisms which classically characterise the biological species (Zink & McKitrick 1995). Birds which do not normally interbreed even though they have the opportunity to do so, such as Blue Tit and Great Tit, are good species according to both the BSC and the PSC, and those which do not interbreed because they never come into contact, such as Willow Grouse and the British Red Grouse, are of uncertain status under the BSC, but will probably be regarded as different species under the PSC. For allopatric taxa such as the grouse, the PSC makes no prediction as to what would happen if they came into contact in the future, and there is no assessment of the amount of divergence or of the biological implications of the differences between the taxa; if they are different, they are split as separate species. This applies even if the differences are biologically 'trivial' or marginal. Proponents of the PSC argue that since, in terms of the BSC, it is impossible to make an objective decision about the specific status of isolated populations, such as the Red Grouse, adoption of the simple, unambiguous PSC makes more sense.

A characteristic of the PSC is that it is entirely compatible with standard taxonomic practice when classifying genera, families etc.: it explicitly states that only *monophyletic* grouping is allowed, and that classification must accurately reflect patterns of evolution (Mishler 1985). For example, a genus such as *Oxyura* is valid only if the

Box 1. Paraphyly: taxonomic anathema!

One can imagine that, over evolutionary time, a single species (A) may diverge geographically into four different subspecies, only marginally different from each other and fully reproductively compatible on the rare occasions when they meet in the wild (populations A1 to A4 in fig. 3a, below). If rapid environmental change subsequently causes one of the subspecies (say, A2) to undergo genetic or behavioural changes to the extent that it can no longer breed with A1, A3 or A4, then it would be classified as a separate biological species (B in fig. 3b). This leaves species A, comprising subspecies A1, A3 and A4 as a 'disallowed' paraphyletic grouping. As biologists, people may say that this is a red herring: birds do not read textbooks, and, if the way things are is in conflict with our rules, we should change our rules. To other systematists, however, paraphyly is anathema, and the fact that the biological species definition may lead to a classification which fails to represent evolutionary history may be sufficient reason to analyse whether it really serves any useful function in systematics (Zink & McKitrick 1995). According to the PSC, A1, A2, A3 and A4, if diagnosably distinct, are all classified as separate species, and the evolution of reproductive isolation which turns A2 into biological species B is just one extra unique character distinguishing A2 from its sister species A1.



Under the BSC, A1, A3 and A4 in fig. 3b are lumped as one species. There is a danger that A1 could generally be regarded as being more closely related to A3 and A4 than it is to the separate species B, whereas the exact opposite is the case: A1 is more closely related to B. Thus, BSC classification can give a false impression of evolutionary relationships.

An example may be the problem presented by the Yellow Wagtail 'species' *Motacilla flava*. Although there is currently much ignorance about the relative extent of contact and hybridisation between them, many 'subspecies' of the Yellow Wagtail are currently recognised, and their evolution may be represented by some sort of tree. One of these wagtails, the 'Black-headed Wagtail' *M. f. feldegg*, has a number of morphological and vocal distinctions which might make it a full species. If this were so, however, the *Motacilla flava* species may become paraphyletic, as it would exclude one of the descendants (*feldegg*) of the ancestral stock. Notwithstanding our ignorance about many Yellow Wagtail forms, this is probably no problem under the PSC, since many of the 'subspecies' can be interpreted as representing the terminal branches of an evolutionary tree and hence may qualify for specific status. Under the BSC, however, our ignorance is far too great to make any pronouncement, and there is as yet no real evidence of selection against hybrids or of reproductive isolation, and therefore no justification for treating the various forms as separate species.

genealogical tree can be traced back to a single ancestral species, and all descendants of that species are included in the genus. Paraphyly, in which some descendants of the original ancestor are omitted from the genus, is not allowed.

The PSC and 'diagnosability'

For a taxon to qualify as a full species under the PSC, a rigorous, unbiased cladistic analysis *should* be performed to illustrate the evolutionary divergence of any proposed phylogenetic species from its most closely related sister taxa. In its strictest sense, this should mean constructing evolutionary trees based on all available data for all species which one wants to define (as above), in order to ensure monophyly. The more popular version of the PSC is, however, the original one (Cracraft 1983; see page 11), in which a taxon is accorded the status of a species on the basis of diagnosability: this

means that individuals of the 'species' must be unambiguously recognisable as being different, whether morphologically, biochemically or genetically, from other taxa. Diagnosability is taken as evidence of genealogical separation from other species.

One could consider, not without justification, that there is little difference between the PSC in this form (effectively a 'horizontal' viewpoint) and the morphological species definition.

The practicalities of the PSC: is it any more objective or useful than the BSC?

The BSC and various subjective methodologies based around it, although far from perfect, are the commonly used criteria by which species are defined. When other species concepts are proposed, the onus is on their proponents to show that the alternatives are (a) more beneficial to ornithology and (b) more scientifically rigorous and objective, or that they (c) generally make more sense. Does the PSC fulfil these criteria sufficiently to justify the reclassification of the World's avifauna? Put another way, does the PSC allow us to move more rapidly towards a correct classification of the World's birds than will the BSC?

Snow (1997) went into some depth to analyse the treatment which a number of Western Palearctic birds would receive under a PSC classification, particularly with respect to the practical difficulties of sorting out the status of those polytypic species which have a number of subspecies spread over a large geographical range (Coal Tit *Parus ater* and Blackbird *Turdus merula* are used as examples), and where some of the subspecies are diagnosably distinct and/or geographically isolated but others overlap or intergrade with other subspecies. The first conclusion is that a lot more work would have to be done before any proposals could be made. This does not in itself invalidate the use of the PSC, of course, but a more significant problem would be a tendency for those distinctive subspecies fortunate enough to be cast away on offshore islands (or otherwise isolated) to be given full specific status, whereas equally distinctive forms which happen to be part of the species' main range and which either intergrade with other subspecies or for any reason are not safely diagnosable would be 'abolished'; large amounts of genetic diversity would therefore receive no taxonomic recognition at all.

Many forms which are currently defined as species only under the PSC are probably good species under the BSC as well. Investi-

Case study

It is not clear how proponents of the PSC will tackle situations where two distinctive forms of a species, in different parts of its geographical range, are linked by a smooth gradient (cline) of intermediates. Whereas the Common Chiffchaff *P. c. collybita* and the Siberian Chiffchaff *P. c. tristis* are diagnosably different when individuals from the cores of their respective ranges are examined (and are therefore potential phylogenetic species), they are currently regarded as the opposite ends of a huge interbreeding population of chiffchaffs across northern Europe and Asia (Clement & Helbig 1998; Loskot & Solokov 1998; Marova-Kleinbub 1998). The two forms are linked by a cline of intermediates whereby *P. c. collybita* merges into *P. c. abietinus*, which merges into *P. c. tristis*, and they are therefore (in the absence of any hard evidence of their respective separate evolutionary histories) not classified as separate species under the PSC. Since, in the terms of a PSC taxonomy, subspecies are not named, this could leave a significant amount of the biological diversity of Common Chiffchaffs with no formal taxonomic recognition. If a freak environmental catastrophe wiped out *P. c. abietinus* overnight, such that *tristis* and *collybita* were no longer linked, then presumably they would, in the absence of any biological change on their part, very quickly become full species under the PSC as it is popularly applied. A potentially damaging problem with a 'diagnostic' PSC is the fluidity with which two forms of bird could on short time scales be repeatedly split and relumped entirely on the basis of accidental physical events, thus leading to instability and confusion. Whereas the chiffchaff scenario as presented above is unlikely, one can envisage that the taxonomic status of endangered species living in threatened and fragmenting rainforest habitats could change regularly, depending on the dynamics of local forestry activities.



Robin Chittenden

6. Siberian Chiffchaff *Phylloscopus collybita tristis*, Suffolk, October 1994.

gations of the morphological and behavioural differences which mark off a PSC species can unmask a genuine biological reproductive barrier between it and related forms with which it has erroneously been lumped. The apparently diagnostic song of the Iberian Chiffchaff *P. brehmii*, for example (together with a degree of ignorance about the dynamics of its zone of overlap with *collybita*), would have made it a contender for specific status under the PSC long before evidence of a biological reproductive barrier between it and Common Chiffchaff was obtained (Clement & Helbig 1998; Helbig *et al.* 1993, 1996; Salomon *et al.* 1997). Gathering the necessary data for designation of a full species under the BSC may take a long time, or be totally impossible, and using the PSC criteria of diagnostic differences may point to the correct taxonomic situation much more quickly. In some cases where an apparent conflict exists between the BSC and the PSC with regard to two or more forms which are not entirely allopatric, this is possibly due to ignorance of the real biological interaction between the taxa in question: the PSC criteria may in fact be diagnosing real, but difficult-to-prove, biological species.

Clines and hybrid zones

Hooded *Corvus corone cornix* and Carrion Crows *C. c. corone* form, along the boundary of their ranges, a hybrid zone where interbreeding occurs and where hybrids, as well as pure individuals of both parental taxa, can be found. Both hybrid zones and clines (the zone of smooth transition between two distinct subspecies) create problems for diagnosability, and hence for the PSC.

While morphological and genetic divergence between two types of bird is taken as good evidence for their genealogical divergence, and hence speciation, under the PSC, it is nevertheless possible (as in the case of the crows) that a large amount of hybridisation can occur between them. One is not constructing an honest phylogeny if one ignores the fact that widespread gene flow exists between two 'branches' of the evolutionary tree. There is still a reticulate genealogy connecting the Carrion and Hooded Crows, so it is not a straightforward process to classify them as separate species on strict phylogenetic grounds, yet this is precisely what has been done on the basis of numerous qualitative morphological and behavioural differences between the two (Sangster *et al.* 1998).

The BSC can cope with hybrid zones and clines because it is possible, at least in theory, to study the interaction between two avian taxa and to determine whether ecological differences exist between them and the

extent of any reproductive isolation and selection against hybrids. The crows, for example, have a reasonably stable hybrid zone of variable width along the full extent of the area of contact across Europe (Cramp & Perrins 1994). Molecular evidence from Alpine populations reveals a smooth cline of (presumably selectively neutral) introgressing genetic markers across the hybrid zone; but there is good evidence for a genuine ecological separation between them and selection against the hybrids (Saino 1992; Saino *et al.* 1992). Furthermore, there is some evidence of the beginnings of reproductive isolation (in Germany, Carrion Crows have been shown to prefer to mate with Carrion Crows and Hooded Crows with Hooded), the slightly different calls of the two possibly aiding recognition (Palestrini & Rolando 1996; Risch & Andersen 1998). They are candidate biological species, albeit with imperfect reproductive isolation, but the genetic introgression between the two forms suggests that it is wrong to define them uncritically as separate species under the PSC. In this case, it can be argued that the BSC not only is more rigorous in getting to the heart of an interesting biological scenario, but is also a more honest and accurate means of classifying the taxa involved.

There are statistical methods of defining phylogenetic species when the birds in question commonly interbreed (Davis & Nixon 1992), but it is not clear to what extent these models have any real biological relevance. Broader phylogenetic (evolutionary) species definitions cope with hybridisation between forms by emphasising that such events do not necessarily mean that two species will merge; if introgression is limited by natural selection against the hybrids, they will continue to evolve independently, maintaining broadly separate genetic lineages. This is exactly the same argument by which the BSC deals with hybridisation, and further stresses the underlying common ground between the two concepts.

If the BSC is full of opinion, subjectivity and dogma, then so is the PSC (Snow 1997). As can be seen from the above, the apparent simplicity and objectivity of the PSC starts to melt under cursory scrutiny (Collar 1997); this is not necessarily a bad thing, and similar problems exist with the BSC. There are problems associated with attempting to recognise biological species primarily on the basis of a process such as reproductive isolation (Zink 1997). The BSC does, however, have a solid biological reasoning behind it. When we look at living animals and plants, we do not see an infinite intergradation between them; they arrange themselves into tight morphological clusters (species) with gaps in between, and reproductive isolation maintains the integrity of these clusters. Proponents of the BSC claim that reproductive isolation is not just one more taxonomic character, like the arrangement of the pelvis or the molecular structure of the feathers, to be considered when drawing up an evolutionary tree; it is an overriding factor in how birds organise themselves in nature. In contrast, arguments for the adoption of the PSC lack such a foundation; the strongest arguments for the adoption of the PSC are defined in the light of the failings of the BSC (Preddy 1999; Zink 1997). There seems to be no reason why species should absolutely have to be basal monophyletic groups, except that proponents of the PSC say so. 'Although recognising the intrinsic importance of reproductive isolation, users of a Phylogenetic Species Concept *choose* [my italics] not to include this information in the delimitation of species' (Zink 1997).

The UK 1000 Club?

Some people worry that widespread use of the PSC will lead to the designating of thousands of new species which are almost indistinguishable from each other in the field. Certainly, a strict agenda of phylogenetic splitting would eventually involve the recognition of all isolated populations of a single presumed biological species as full phylogenetic species in their own right, and some frightening studies have been performed on rainforest insects which suggest that each species can be subdivided into 200 populations which may be candidates for full specific status under the PSC. The situation may not, however, be so daunting for birds, which are bigger than insects, are often highly dispersive, and are not intimately associated with extremely narrow microhabitats. Adoption of the PSC would probably lead to a doubling in number of the World's avian species (Snow 1997; *Proc. IOC Durban*,

1998); many of these will almost certainly be shown also to be good, but previously unrecognised, biological species. Even if the PSC did lead to a huge increase in the number of bird species, this would not invalidate the principle, nor indeed its workability (cf. the problems faced by entomologists) (Hazevoet 1995), although it might not be very 'birder-friendly'.

The use of DNA

With the explosive advances in molecular biological techniques since 1980, it has become possible to compare particular DNA sequences in different bird populations; stretches of mitochondrial DNA coding for e.g. cytochrome-*b* have proved convenient models for study, on account of high mutation rates and uniparental inheritance (e.g. Heidrich *et al.* 1996; Helbig *et al.* 1995; Mallet 1996; Seibold & Helbig 1995). When two bird populations, initially of the same species, stop breeding with each other, random mutations throughout their genomes (entire complement of DNA) build up independently, so that their DNA sequences diverge. The more distantly related two taxa are, the greater the difference they are likely to show in any particular stretch of their DNA (Hillis & Moritz 1990; Sibley & Ahlquist 1990; Sibley & Monroe 1990), although the rates of DNA divergence are not so clock-like as was originally thought.

Once the same stretch of DNA has been sequenced for several different avian taxa, there are a number of different, but related, mathematical algorithms which work out the most likely (or parsimonious) phylogenetic relationship between those taxa, from which it is possible to draw an evolutionary tree. These trees vary enormously in their robustness, depending on the quality of the data in terms of the number of DNA base changes between closely related taxa. This is a complex issue, but clearly those bits of an evolutionary tree which stay the same no matter which mathematical analysis is performed are more certain than those branches which change position with different analyses. Often, scientists will present a 'consensus' tree, which represents the most likely evolutionary scenario based on all their maths. The branches of these trees usually come with probabilities which indicate how robust the relationship of any bird is with its neighbouring taxa. These should be studied, and an evolutionary tree presented without these numbers should be treated with extreme caution.

An example of how studies of mitochondrial DNA (mtDNA) have proved very useful for scientists looking at the relatedness of spatially separated populations is provided by Helbig *et al.* (1995), who examined two sister taxa, 'Western' and 'Eastern' Bonelli's Warblers *P. [bonelli]*, the distributions of which are geographically separated, probably almost never meet in the wild, and hence are impossible to classify objectively when using the BSC. They showed that the divergence between the two of a stretch of the cytochrome-*b* gene was as great (8.6%) as that between the Bonelli's warblers and the Wood Warbler *P. sibilatrix*, and greater than the differences shown by any other subspecies yet analysed. In conjunction with the morphological differences between the two, and their distinctive songs, which are known to play a part in mate choice, the authors concluded that Western and Eastern Bonelli's Warblers are separate biological species, *P. bonelli* and *P. orientalis*. DNA-sequence data can provide useful information (when used as one line of evidence among many) on the specific status of any one taxon.

There are a few caveats and misunderstandings to be aware of. First, all the individuals of any species are not identical in their DNA: mutations occur all the time, and different individuals from a single species may be carrying slightly different versions (alleles) of the gene under study. For any DNA analysis to be meaningful, sufficient individuals from each species must be examined to be sure that the range of DNA variation within the species is understood. Many studies, relying on sampling only one or two individuals from each species, have not achieved this, and hence should be treated cautiously.

Secondly, oversimplification of the presentation of DNA data has led to misconceptions among some in the birdwatching community that there is a percentage divergence beyond which two subspecies of bird come to merit full species status (*Birding World* 11: 273); this is not the case. DNA divergence merely provides a crude numer-



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7. Eastern Bonelli's Warbler *Phylloscopus orientalis*, Israel, February 1993.

ical measure of the length of time since cross-breeding between two separate populations of a single species became very uncommon. This may not happen at the same time as the speciation event (Avise & Ball 1991), and in any case, as has been shown above, speciation in birds can occur in a very short period of time, involving maybe only a mutation in a single gene in extreme, theoretical, cases. In these instances, good, but very young, biological species may show less divergence in their mtDNA than do the individuals at the extremes of a long-established cline of spatially diffuse subspecies of an 'old' species. Fig. 2 in Helbig *et al.* (1995) graphically illustrates this. Just as there is no degree of morphological divergence which reliably separates species from subspecies, so there will never be a fixed degree of genetic divergence which defines a speciation event (Knox 1994b) – especially as the genes being sequenced are unlikely to be the ones controlling genetic incompatibility, ecology, plumage and behaviour, factors which are responsible for reproductive isolation.

Thirdly, mtDNA, or *any* one gene, should not be used on its own (i.e. in the absence of other gene sequences and morphological or behavioural evidence) to define a species, since different genes may give different results in a phylogenetic analysis (Avise & Wollenberg 1997; Zink & McKitrick 1995). DNA evidence which is in conflict with other, 'conventional' data should be backed up by sequences from other genes (preferably both nuclear and mitochondrial) before it can be properly assessed. It is a myth that phylogenetic species will ever, in practice, be defined on the basis of a single DNA base-pair mutation, even if it would theoretically be possible. This 'bottom line' of diagnosability will undoubtedly, however, be a problem if the PSC becomes accepted in common use.

Speciation and species boundaries in a changing world

It is accepted that speciation, at least among birds, occurs with allopatry, when a population from one part of a species' range becomes geographically isolated from members of the same species in another part of the range. Textbooks usually quote isolation on islands, separation by new mountains, or range contraction which splits the once homogeneous range of the species into small pockets of suitable habitat – anything which prevents populations from meeting and breeding. Under these conditions, gene flow between the different populations of the same species stops, and they are free to diverge, genetically and morphologically, from each other.

There are many complications in and addenda to the above-presented scenario (Tokeshi 1999: pp. 12-45 and references therein). It may well be possible for a new species to evolve at the edge of the species' main range (peripatrically), and some theoretical models predict that two species may evolve side by side from a single ancestor. These should not be ignored: restriction of gene flow between members of the same species does not require absolute geographical separation. Geographical separation is only an extreme version of the restriction of gene flow between individual birds at two opposing limits of a large but continuous range of any single species (there is, for example, probably very little gene flow between Wrens *Troglodytes troglodytes* in southern Spain and those in eastern Russia). The cited references will fill in details of other scenarios.

So, assuming that two populations of the same species become isolated and begin to diverge from each other, when does speciation occur? Divergence may take the form of specific adaptations to the different environments in which the isolated populations now live (a Wren on St Kilda is living in a very different world from that of a Wren in an Essex garden), or it may be primarily accidental, with no selective direction (drift). If, after some period of divergence, the two populations come into contact again (climatic change leading to range expansion, lowering of sea level, etc.), then things become interesting. During their period of isolation from each other they may have lost the ability to interbreed (e.g. genetic changes mean that the hybrids are now inviable), in which case it is obvious that speciation has occurred (by any species concept). Alternatively, the two may still be physiologically capable of interbreeding, but do not do so, perhaps because their songs or displays have changed and they no longer recognise each other as potential mates, or because they now breed at different times of year, or in different habitats; or they may interbreed, but have hybrids of reduced fitness, leading to selective pressure for further reproductive isolation mechanisms – in this case, there may be a point of contention as to whether they should yet be regarded as full species. On the other hand, the two populations may interbreed freely when they meet again, with no loss of viability or fertility in the hybrids, leading to complete reintegration into one homogeneous species, in which case it can be said that biological speciation never occurred during isolation. This is the 'species problem'. We recognise the process by which speciation is occurring, but there are intermediate steps along the pathway as one species becomes two, and there are philosophical differences over where to draw the line of speciation in this grey zone.

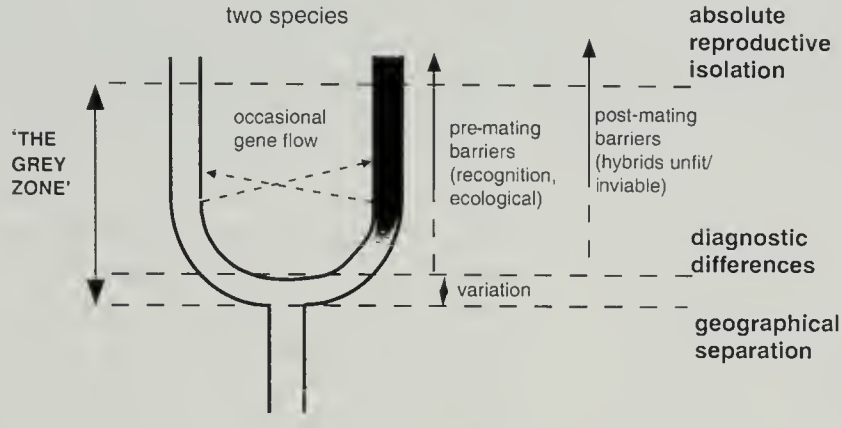
Both the definition and the practical recognition of species would be much simpler if life and climate were not so dynamic, and if the interactions observed among organisms were ancient and unchanging. If the 'large white-headed gulls' *Larus argentatus/michahellis/cachinnans* had maintained their separate identities over geological time, we would have no hesitation in defining them as species. Similarly, if isolated island populations of widespread species were separated for millions of years, with no prospect of meeting their relatives on the mainland, simple genetic and morphological differences between the forms would probably be sufficient to enable us to classify them accurately. Unfortunately, the World is not like that.

The biological history of the Western Palearctic in the last million years has been dominated by at least nine Ice Ages, when much of the landmass was covered by glaciers (Mannion 1991). The last glaciation ended only about 10,000 years ago and, at its height, rendered much of northern and central Europe entirely inhospitable to the kinds of life which that region today supports. Some 20,000 years ago, northern Europe, including much of Britain, was under glaciers, and the permafrost extended almost to the Mediterranean coasts of France and Italy (Dawson 1992). Anything approaching temperate conditions must have been found only in Iberia and around the shores of the Mediterranean into the Balkans. Furthermore, although the glaciations were particularly violent environmental perturbations, climatic change was severe for much of the last 12-13 million years, as episodes of global warming culminated in the desiccation of the Mediterranean Sea, among other climatic upheavals (Blondel & Mourer-Chauviré 1998).

Box 2. The 'grey zone' of speciation

Following the model of allopatric speciation, as one species splits into two, supporters of different species concepts differ in their opinion as to when speciation is complete. A PSC definition which regards diagnosability as sufficient for specific rank would regard the two offshoots as different species as soon as they can be told apart. Supporters of the BSC prefer to see evidence of reproductive isolation, with ecological and morphological differences at least as great as those which exist between other, similar species. The period of time during which various species concepts classify evolving taxa differently is the 'grey zone' of speciation.

The problems of classifying birds are exacerbated when allopatric taxa in the 'grey zone' expand their ranges and meet again, leading to new biological interactions, potential hybridisation, coevolution and competition. The effect of the repeated episodes of glaciation has been to fragment the ranges of many Western Palearctic bird species into separated areas of suitable habitat, different populations diverging in isolation and then, subsequent to climatic amelioration, meeting again while still in the 'grey zone'.



The impact of the Ice Ages on animal and plant populations was immense. The World's climatic zones were squeezed into narrower and narrower latitudes (Markov 1969; Williams *et al.* 1993), and the animals and plants with distributions restricted by the availability of habitat within these climatic zones were squeezed into ever smaller areas (Huntley & Webb 1989). One consequence of this was the fragmentation of formerly widespread, intermingling populations of species into separated subpopulations, restricted to so-called refugia, small pockets of climatically appropriate habitat for the species (e.g. Nores 1992). Today, direct evidence for the existence of isolated refugia is detected in the geographical distribution and genetic composition of Mediterranean and subtropical fauna and flora (Bilton *et al.* 1998; Dansereau 1957; Street 1981). In particular, with temperate conditions in Iberia, Italy and the Balkans being linked only by a very thin band across the Mediterranean coast of Europe, many species were geographically split into eastern and western populations.

The division of species into small subpopulations in unstable ecosystems during periods of rapid environmental change is a scenario both for extinction and for rapid evolution, either by random genetic drift (which occurs more quickly in small populations) or by natural selection, as organisms are selected for maximum fitness in the subtly different ecosystems in which they find themselves. During this period of fragmentation and isolation, the process of speciation was underway (Avise & Walker 1998; Bernatchez *et. al.* 1996). With each retreat of the glaciers, however, the animals and plants appropriate to temperate ecosystems recolonised northern Europe, either from Mediterranean regions or from southeast Europe and central Asia (Bilton *et al.* 1998). But the organisms spreading northwards with the ameliorating climate had been modified by years of isolation and environmental change (Kurten 1972). Separated populations of birds which had belonged to a single species before each Ice Age had inevitably diverged slightly from each other during isolation, and when they came back into contact there would have been a biological interaction between them. What happened

Case study

The complexities of bird evolution in the Western Palearctic are amply demonstrated by the warblers in the genus *Sylvia* (Blondel *et al.* 1996). Genetic evidence suggests that there was one ancestral *Sylvia* warbler with an extensive range in the Mediterranean area 12 million years ago. A period of climatic warming subsequently caused range fragmentation and split the ancestral species into three separate lineages in, respectively, the western, middle and eastern parts of the Mediterranean. About 6 million years ago, with the Mediterranean closing, the middle lineage gave rise to the ancestor of the Garden Warbler *S. borin* and the Blackcap *S. atricapilla*. It was not, however, until the arrival of the Ice Ages, with repeated episodes of warming and cooling leading to expansion and contraction of Mediterranean scrubby habitats, that further speciation events occurred. During this time, the western *Sylvia* warblers split into Marmora's *S. sarda*, Dartford *S. undata* and Tristram's Warblers *S. deserticola*. Eastern ones split into Lesser Whitethroat *S. curruca*, Desert Lesser Whitethroat *S. (c.) minula*, Hume's Lesser Whitethroat *S. (c.) leucomelaena*, Orphean Warbler *S. hortensis* and Desert Warbler *S. nana*. All the other modern species were derived from the middle Mediterranean lineage. Subsequent climatic amelioration has allowed many of these lineages to expand their ranges, meet again and interact.

next (whether the two forms could still interbreed, whether the hybrids were viable, whether the two forms could coexist etc.) depended on the extent to which they had travelled through the 'grey zone' of speciation during isolation (see Box 2, on page 19). Examples are not difficult to find of bird species in northern Europe whose taxonomy and interactions have certainly been influenced by glaciation followed by climatic amelioration (Covas & Blondel 1998): Blackcaps *Sylvia atricapilla*, one species, but having eastern and western European populations with different migration strategies (in Mason 1995; Helbig 1996); nightingales *Luscinia luscinia* and *L. megarhynchos*, in northern Europe two reproductively isolated 'eastern and western' species, with a zone of overlap which is narrow compared with their total ranges; and whitethroats *Sylvia curruca* and *S. communis*, now in sympatry in northwest Europe, but with migration strategies that betray their 'eastern and western' histories (Burton 1995).

The paradigm of glaciation leading to range fragmentation and divergence of iso-



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8. Rufous Nightingale *Luscinia megarhynchos*, adult, Suffolk, June 1996.

lated protospecies both prior to and during the Ice Ages (forms which, incidentally, would be classified as full species under the PSC), followed by biological interactions owing to range expansion during climatic amelioration, is thought to have been replayed many times in the last 12 million years. We are still witnessing the aftershock of the later Ice Ages. Many bird species in the Western Palearctic exhibit unstable population structures and dynamic patterns of interaction with close congeners, which must be direct results of the enormously unstable environment which has dominated their recent population dynamics (also see Bauer 1957, reviewed in Knox 1994b). Many closely related sister species diverged from each other several million years before the Ice Ages (Klicka & Zink 1997), but enough speciation events can be traced back to the last million years to show that Ice Ages have been major factors in the splitting of lineages (Avise & Walker 1998).

In short, many of the Western Palearctic's birds are still in the 'grey zone', where we can recognise the process of biological speciation occurring, but it is not clear whether it has reached completion. It is little surprise that, faced with this complex situation, biologists looking at interactions between closely related birds, usually with only fragments of the sum of evidence they require, are having trouble defining species boundaries. One need only apply the above glacial scenario to the recent history of the 'large white-headed gulls' to appreciate the potential complexities of the interactions between the taxa over the last million years (Bell 1996). Whatever species concept one uses, there are going to be instances of Western Palearctic birds in which the dynamics of their interactions and evolution are sufficiently unsettled that it will not be possible to define them satisfactorily as being of the same or of different species; there will always be borderline cases where the road to speciation is convoluted and gradual.

Conclusions and recommendations

The taxonomist is not merely putting birds into metaphorical boxes for the sake of neatness. The definition of the species boundary is an attempt to recognise the interactions and relationships of one form of bird with other forms, whether in the present or in the past; and whether one prefers to define the species in terms of a bird's present niche in the World, or in terms of its past genealogy, one is dealing with a biological problem. Every species concept is a biological definition, and the argument is about which branch of biology provides a species concept which best serves science.



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9. Thrush Nightingale *Luscinia luscinia*, Landguard, Suffolk, September 1995.

Clearly, the problem with both the definition and the recognition of species is the acceptance that any one species is not, in practice, one big uniform pool of interbreeding organisms. Usually, an individual bird selects its mate from a number of available partners that is very small compared with the entire World population. The global population of many bird species may be divided into more or less transitory subpopulations, with little or no interbreeding among them, at least in the short term. It is also clear that these subpopulations may persist for many generations, and yet be able to merge back together with each other; this is part of the normal and proven ebb and flow of bird populations and ranges over geological time. In this light, the PSC approach of defining new, possibly transitory, species as soon as fixed diagnostic differences are detectable in a population seems, at best, naive.

Nevertheless, a phylogenetic analysis, when applied correctly, rigorously and with parsimony to identify the relationships between birds on the evidence of their morphology, behaviour and genetics, is one of the most powerful tools available to the modern biologist. Many of the species first diagnosed under phylogenetic criteria either have been or almost certainly will be shown to be valid species under the BSC, too. The misapplication of the PSC at the level of 'if it looks different, it is different' is a methodology which redefines the word species in order to allow taxonomic changes to be made in the absence of large amounts of data about the taxon concerned.

The PSC and the BSC are still barely separable at some levels of analysis (Avise & Wollenberg 1997). Once it is realised that the BSC allows two species to interbreed freely, so long as there is selection against the hybrids to an extent which maintains the overall integrity of the two separate taxa (Bell 1996; Mayr 1996), the biological definition of the species starts to hinge entirely on the testability of the taxon as a broadly self-contained genetic lineage of organisms, which is what the PSC should be testing. Indeed, both the BSC and the PSC may eventually be united for most practical situations under a testable genetic concept of the species (Mallet 1996).

Birds are living dynamic animals in the wild. The species is a biological phenomenon and, although a phylogenetic analysis is invaluable within the context of a rigorous diagnosis of the taxonomic status of any potential species, the concept of the species in the abstract should make reference to reproductive isolation. Maybe it is possible to answer the question 'What is a species?' in terms of the role of reproductive isolation in maintaining the integrity of evolving genetic lineages, but to address the second question, 'How do we recognise a species?', in terms of the existence and diagnostic characteristics of these same lineages.

Taxonomy and conservation

The arguments about taxonomy may be seen as 'rearranging the deckchairs on the *Titanic*', with the urgent need for conservation of the Earth's natural habitats and their associated flora and fauna in the face of massive environmental degradation. There is no point in allowing birds to become extinct while we are busy classifying them. On the other hand, the importance of taxonomy to conservation cannot be overstated. Correct taxonomy is fundamental to an understanding of which birds are most precious in terms of the World's genetic resources, so that conservation action can be targeted accordingly: it may be argued, for example, that the conservation of a bird such as the Hoatzin *Opisthocomus hoazin*, with no close relatives, is more important than ensuring the continued survival of every single species of *Phylloscopus* warbler.

Given that the conservation of biodiversity must be accorded the highest priority, it has been suggested that adoption of the PSC and the promotion of all defined subspecies to full specific status could have practical benefits for the conservation of the genetic variation inherent in all species (Hazevoet 1996 illustrates this point). While this may in fact be the case, it could be argued that such a course, by cheapening the species ideal and leading to a proliferation of new 'species', would wreak havoc with international wildlife law (Collar 1997) and lessen the impact on the public perception of the extinction of any one species. Indeed, the use of *wider* species definitions may spur the broader ecological investigation of the



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10. Common Whitethroat *Sylvia communis*, adult male, Norfolk, May 1995.

selective effects of geographical variation that is necessary to protect isolated subspecies. In effect, however, this angle has been sidestepped by international conservation efforts, which are now explicitly aimed at the 'conservation and sustainable use of biological diversity', in other words, the full range of morphological and genetic variations within all forms of life (Article 6A of the Rio Convention on Biological Diversity) (Wynne *et al.* 1995). For the first time, such projects as the UK Biodiversity Action Plan give equal priority to all the genetic variations within species. If current conservation legislation is enacted properly, there should be no need to resort to the PSC in order to give the diversity of life the recognition it deserves. Whereas the subspecies category is currently a bit of a dumping ground for many birds of uncertain taxonomic status, promotion of all diagnosable subspecies to full species could merely transfer the 'trash-can' tag to the species category, and, for the purposes of conservation biology, this is to be avoided at all costs. It should not matter whether a particular bird is a species or a subspecies – all biological diversity merits conservation (Collar 1997; Collinson 1999; Knox 1994b).

The future: lumping, splitting and listing

As biological knowledge advances, and more is learnt about the fine-scale genetics and ecology of birds in the wild, it is inevitable that the taxonomic status of many more forms and species will shift. This is entirely to be welcomed if it is a genuine symptom of a greater understanding of the natural world. Biology is a fluid science, and every biologist must be unafraid to admit and to rectify the mistakes of the past. This fluidity is, however, open to exploitation by sloppy scientists and 'parataxonomists' (Janzen, in Collar 1997): people who feel that it is acceptable to propose taxonomic changes prematurely, with the excuse that any mistakes can be rectified later when all the essential data on the biology of the taxon concerned are available. This is not tolerable: taxonomists and, indeed, all ornithologists of the future will not thank us if we lay a trail of taxonomic changes scattered through the literature, such that, when they look at, say, a reference to *Motacilla flava* from the year 2000, they are unsure whether it refers to one form of a superspecies or the whole group of 'yellow' wagtails. It is already tricky enough to trace the name of some birds through their

various incarnations since the time they were first classified. It may become insurmountably difficult if, on top of the justified taxonomic flux, we pile on a host of premature and gratuitous taxonomic changes which then have to be reversed a few years down the line. In order to avoid this, I suggest that national and unofficial taxonomic committees, and magazine editors, follow two principles (some already do):

1. That all taxonomic decisions be made on the basis of all the available evidence, and not just on those bits of the evidence which coincide with the ideology of the particular committee or editorial board;
2. That changes to the existing taxonomy be made only if the evidence that the taxa in question are currently misclassified is overwhelming (this may mean deferring a decision for some years).

Any ornithologist or birdwatcher would agree that it is not absolutely necessary to know the definitive specific status of every bird they see in order either to work on them or to derive pleasure from watching them. Indeed, for recording purposes, it is not essential to know whether every defined form of a bird is a subspecies or a species. It is, some would say, the job of every interested birder to try to glean, by careful observation, as much information as possible about the birds that he or she sees. Part of this task involves attempting to identify the provenance of any particular bird by assigning it, when possible, to a particular race, and giving the reporting of identifiable races equal priority to that of undisputed species (as in Witherby *et al.* 1938-41). This will help us to build a better picture of bird distributions and movements in the Western Palearctic.

Endnote

Given the tumultuous climatic history of the last million years in the Western Palearctic, and the continuum of examples of relationships and interactions among bird species, one's head tends to fill with crows, wagtails, geese *Anser/Branta*, scoters *Melanitta*, indeed with anything where the subject of contentious taxonomy comes up. It remains a challenge for the birdwatcher to maintain a sense of perspective, to be prepared to wait for fresh data to emerge and, most importantly, to look at each case on its individual merits. There will never be a simple fixed set of rules which can reliably and indisputably define the species boundary for every group of related organisms – the only uncontested principle in biology is that nothing ever happens in the same way twice.

The views presented in this paper are those of the author only, and should in no way be taken as necessarily being the views of the BOURC Taxonomic Sub-committee.

Acknowledgments

This paper would have been very much poorer without the input of Jeremy Greenwood, whose intellectual contribution was immense. I am grateful that he has allowed me to steal many of his ideas. I thank Steve Preddy, Tony Marr and Alan Knox for invaluable comments, and also the people on ukbirdnet. Thanks to the staff and volunteers at the Scottish Ornithologists' Club and its excellent Waterston Library.

References

Avise, J. C., & Ball, R. M. 1991. Mitochondrial DNA and avian microevolution. *Acta XX Congr. Int. Orn.* 1: 514-524.

— & Walker, D. 1998. Pleistocene phylogeographic effects on avian populations and the speciation process. *Proc. Roy. Soc. Lond. (B)* 265: 457-463.

— & Wollenberg, K. 1997. Phylogenetics and the origin of species. *Proc. Natl. Acad. Sci. USA* 94: 7748-7755.

Barton, N. H., & Hewitt, G. M. 1985. Analysis of hybrid zones. *Ann. Rev. Ecol. Syst.* 16: 113-144.

Bauer, K. 1957. Zur systematischen Stellung des Blutspechtes. *Falke* special vol. 3: 22-25.

Bell, D. A. 1996. Genetic differentiation, geographic variation and hybridisation in gulls of the *Larus glaucescens-occidentalis* complex. *Condor* 98: 527-546.

Benkman, C. W. 1993. Adaptation to single resources and the evolution of crossbill (*Loxia*) diversity. *Ecol. Monogr.* 63(3): 305-325.

Bernatchez, L., Vuorinen, J. A., Bodaly, R. A., & Dodson, J. J. 1996. Genetic evidence for reproductive isolation and multiple origins of sympatric trophic ecotypes of whitefish (*Coregonus*). *Evolution* 50(2): 624-636.

Bilton, D. T., Mirol, P. M., Mascheretti, S., Fredga, K., Zima, J., & Searle, J. B. 1998. Mediterranean Europe as an area of endemism for small mammals rather than a source for northwards postglacial colonization. *Proc. Roy. Soc. Lond. (B)* 265: 1219-1226.

Blondel, J., Catzeflis, F., & Perret, P. 1996. Molecular phylogeny and the historical biogeography of the warblers of the genus *Sylvia* (Aves). *Evol. Biol.* 9: 871-882.

— & Mourer-Chauvire, C. 1998. Evolution and history of the Western Palearctic avifauna. *Trends Ecol. Evol.* 13: 488-492.

Burkhardt, R. W. 1987. Lamarck and species. In *Histoire du concept d'espèce dans les sciences de la vie*. Fondation Singer-Polignac, Paris.

Burton, J. J. 1995. *Birds and Climate Change*. London.

Byrkjedal, I., & Thompson, D. 1998. *Tundra plovers: The Eurasian, Pacific and American Golden Plovers*

and Grey Plover. London.
Cain, A. J. 1954. *Animal Species and their Evolution*. London.
Carter, G. S. 1951. *Animal Evolution. A Study of Recent Views of its Causes*. London.
Chapman, R. N. 1931. *Animal Ecology with Especial Reference to Insects*. New York.
Clement, P., & Helbig, A. J. 1998. Taxonomy and identification of chiffchaffs in the Western Palearctic. *Brit. Birds* 91: 361-376.
Coleman, W. 1979. Bergmann's rule: animal heat as a biological phenomenon. *Stud. Hist. Biol.* 3: 67-88.
Colinvaux, P. 1993. *Ecology 2*. New York.
Collar, N. J. 1997. Taxonomy and conservation; chicken and egg. *Bull. BOC* 117: 122-136.
Collinson, M. 1999. Subspecies - more than meets the eye? *Brit. Birds* 92: 118-119.
Covas, R., & Blondel, J. 1998. Biogeography and history of the Mediterranean bird fauna. *Ibis* 140: 395-407.
Cracraft, J. 1983. Species concepts and speciation analysis. *Curr. Ornith.* 1: 159-187.
— 1987. Species concepts and the ontogeny of evolution. *Biol. Philos.* 2: 63-80.
— 1992. The species of birds-of-paradise (Paradisaeidae): applying the phylogenetic species concept to a complex pattern of diversification. *Cladistics* 8: 1-43.
Cramp, S., & Perrins, C. M. (eds.) 1994. *The Birds of the Western Palearctic*. vol. 8. Oxford.
Dansereau, P. 1957. *Biogeography: an ecological perspective*. New York.
Darwin, C. 1859. *On the Origin of Species by Means of Natural Selection, or, the preservation of favoured races in the struggle for life*. London.
Davis, J. I., & Nixon, K. C. 1992. Populations, genetic variation and the delimitation of phylogenetic species. *Syst. Biol.* 41: 421-435.
Dawson, A. G. 1992. *Ice Age Earth: late quaternary geology and climate*. London.
de Queiroz, K. 1998. The General Lineage Concept of species, species criteria, and the process of speciation. In: Howard, D. J., & Berlocher, S. H. (eds.), *Endless Forms, Species and Speciation*: 57-75. Oxford.
Dobzhansky, T. 1937. *Genetics and the Origin of Species*. New York.
— 1950. Mendelian populations and their evolution. *Amer. Naturalist* 84: 401-418.
Erlich, P. R., & Raven, P. H. 1969. Differentiation of populations. *Science* 165: 1228-1231.
Gause, G. F. 1934. *The Struggle for Existence*. Baltimore.
Gil, D. 1997. Increased response of the short-toed treecreeper *Certhia brachydactyla* in sympatry to the playback of the song of the common treecreeper *C. familiaris*. *Ethology* 103: 632-641.
Gill, F. B. 1990. *Ornithology*. New York.
Grant, P. R. 1975. The classical case of character displacement. *Evol. Biol.* 8: 237-337.
— & Grant, B. R. 1992. Hybridisation of bird species. *Science* 256: 193-197.
— & — 1997. Genetics and the origin of bird species. *Proc. Natl. Acad. Sci. USA* 94: 7768-7775.
Haffer, J. 1992. The history of species concepts and species limits in ornithology. *Bull. BOC Centenary Suppl.* 112A: 107-158.
Hazevoet, C. J. 1995. *The Birds of the Cape Verde Islands*. BOU Checklist No. 13.
— 1996. Conservation and species lists: taxonomic neglect promotes the extinction of endemic birds, as exemplified by taxa from eastern Atlantic islands. *Bird Conserv. Int.* 6: 181-196.
Heidrich, P., Ristow, D., & Wink, M. 1996. Molecular differentiation of Cory's and Manx Shearwaters (*Calonectris diomedea, Puffinus puffinus, Puffinus yelkouan*) and the herring gull complex (*Larus argentatus, Larus fuscus, Larus cachinnans*). *J. Orn.* 137: 281-294.
Helbig, A. J. 1996. Genetic basis, mode of inheritance and evolutionary changes of migratory directions in Palearctic warblers (Aves: Sylviidae). *J. Exp. Biol.* 199: 49-55.
—, Salomon, M., Wink, M., & Bried, J. 1993. Absence of mitochondrial gene flow between European and Iberian Chiffchaffs (*Phylloscopus collybita collybita, P. (c.) brehmii*) - the taxonomic consequences - results drawn from PCR and DNA sequencing. *Comptes Rendus de l'Académie des Sciences Série III - Sciences de la Vie* 316: 205-210.
—, Seibold, I., Martens, J., & Wink, M. 1995. Genetic differentiation and phylogenetic relationships of Bonelli's warbler *Phylloscopus bonelli* and green warbler *P. nitidus*. *J. Avian Biol.* 26(2): 139-153.
—, Martens, J., Seibold, I., Henning, F., Schotter, B., & Wink, M. 1996. Phylogeny and species limits in the palearctic Chiffchaff *Phylloscopus collybita* complex - mitochondrial genetic differentiation and bioacoustic evidence. *Ibis* 138(4): 650-666.
Hillis, D. M., & Moritz, C. (eds.) 1990. *Molecular Systematics*. Sunderland, Mass.
Huntley, B., & Webb, T. 1989. Migration: species' response to climatic variations caused by changes in the Earth's orbit. *J. Biogeogr.* 16: 5-19.
James, F. C. 1983. Environmental component of morphological differentiation in birds. *Science* 221: 184-186.
Kaiser, P. E., Mitchell, S. E., Lanzaro, G. C., & Seawright, J. A. 1988. Hybridisation of laboratory strains of sibling species A and B of *Anopheles quadrimaculatus*. *J. Am. Mosq. Control. Assoc.* 4: 34-38.
Klicka, J., & Zink, R. M. 1997. The importance of recent Ice Ages in speciation: a failed paradigm. *Science* 277: 1666-1669.
Knox, A. G. 1990. The sympatric breeding of Common and Scottish Crossbills *Loxia curvirostra* and *L. scotica*, and the evolution of crossbills. *Ibis* 132: 454-466.
— 1994a. Species and subspecies. *Brit. Birds* 87: 51-58.
— 1994b. Lumping and splitting. *Brit. Birds* 87: 149-159.
Kurten, B. 1972. *The Ice Age*. London.
Lack, D. 1947. *Darwin's Finches*. Cambridge.
Livezey, B. C. 1995. Phylogeny and comparative ecology of stiff-tailed ducks (Anatidae: Oxyurini). *Wilson Bull.* 107(2): 214-234.
Loskot, V. L., & Solokov, E. P. 1998. Taxonomy of the chiffchaff superspecies *Phylloscopus collybita-P. lorenzii*. *Proc. 22 Int. Orn. Congr., Durban*. In *Ostrich* 69.
Lotka, A. J. 1925. *Elements of Physical Biology*. Baltimore.
Mallet, J. 1996. The genetics of biological diversity: from variation to species. In: Gaston, K. J. (ed.), *Biodiversity: a biology of numbers and difference*. London.
Mannion, A. M. 1991. *Global Environmental Change*. Harlow.
Markov, K. K. 1969. Geographical regions and zones and their quaternary development. *Proc. VII Conference Int. Assoc. Quat. Res.* Nat. Acad. Sci.

Washington.
Marova-Kleinbub, I. M. 1998. Zones of secondary contact and the earlier stages of speciation in Palearctic warblers: Sylviidae. *Proc. 22 Int. Orn. Congr., Durban*. In *Ostrich* 69.
Mason, C. F. 1995. *The Blackcap*. London.
Mayr, E. 1949. Speciation and systematics. In: *Genetics, Paleontology and Evolution*: 281-298. Princeton.
— 1963. *Animal Species and Evolution*. Cambridge, MA.
— 1988. The why and how of species. *Biol. Phil.* 3: 431-441.
— 1996. What is a species and what is not? *Philosophy of Science* 63: 262-277.
Mishler, B. D. 1985. The morphological, developmental and phylogenetic basis of species concepts in bryophytes. *Bryologist* 88: 207-214.
Nores, M. 1992. Bird speciation in subtropical South America in relation to forest expansion and retraction. *Auk* 109: 346-357.
Osiejuk, T. S. 1998. Correlates of creeping speed variability in two species of treecreeper. *Condor* 100: 174-177.
Palestrini, C., & Rolando, A. 1996. Differential calls by Carrion and Hooded Crows (*Corvus corone corone* and *Corvus corone cornix*) in the Alpine hybrid zone. *Bird Study* 43: 364-370.
Perrins, C. 1974. *Birds*. London.
Preddy, S. 1999. The species-concepts debate. *Brit. Birds* 92: 261-262.
Price, T. 1998. Sexual selection and natural selection in bird speciation. *Phil. Trans. Roy. Soc. Lond. (B)* 353: 251-261.
Risch, M., & Andersen, L. 1998. Non-random mating of crows (*Corvus corone*) in a hybrid zone of Carrion Crow (*C. c. corone*) and Hooded Crow (*C. c. cornix*). *J. Orn.* 139: 173-177.
Saino, N. 1992. Selection of foraging habitat and flocking by crows *Corvus corone* phenotypes in a hybrid zone. *Ornis Scand.* 23(2): 111-120.
— Lorenzini, R., Fusco, G., & Randi, E. 1992. Genetic variability in a hybrid zone between Carrion and Hooded Crows (*Corvus corone corone* and *C. c. cornix*, Passeriformes, Aves) in north-western Italy. *Biochem. Sys. Ecol.* 20: 605-613.
Salomon, M. 1989. Song as a possible reproductive isolating mechanism between two parapatric forms – the case of the chiffchaffs *Phylloscopus collybita collybita* and *Phylloscopus collybita brehmii* in the western Pyrenees. *Behaviour* 111: 270-290.
— & Hemim, Y. 1992. Song variation in the chiffchaffs (*Phylloscopus collybita*) of the western Pyrenees – the contact zone between the *collybita* and *brehmii* forms. *Ethology* 92: 265-282.
—, Bried, J., Helbig, A. J., & Riofrio, J. 1997. Morphometric differentiation between male Common Chiffchaffs *Phylloscopus (c.) collybita* Vieillot, 1817, and Iberian Chiffchaffs *P. (c.) brehmii* Homeyer, 1871, in a secondary contact zone (Aves: Sylviidae). *Zoologischer Anzeiger* 236: 25-36.
Sangster, G. 1996. Species limits in the Blue Tit complex: new evidence from play-back studies. *Dutch Birding* 18(2): 85-88.
— 2000. Taxonomic status of *bernicla* and *nigricans* Brent Geese. *Brit. Birds* 93: 94-96.
—, Hazevoet, C. J., Politecnica, R. E., van den Berg, A. B., & Roselaar, C. S. 1997. Dutch avifaunal list: taxonomic changes in 1977-97. *Dutch Birding* 19(1): 21-28.
—, —, —, — & — 1998. Dutch avifaunal list: species concepts, taxonomic instability, and taxonomic changes in 1998. *Dutch Birding* 20(1): 22-32.
Seibold, I., & Helbig, A. J. 1995. Evolutionary history of New World and Old World vultures inferred from nucleotide sequences of the mitochondrial *cytochrome b* gene. *Phil. Trans. Roy. Soc. Lond. (B)* 350: 163-178.
Sibley, C. G., & Ahlquist, J. E. 1990. *Phylogeny and Classification of Birds. A Study in Molecular Evolution*. New Haven.
— & Monroe, B. L. 1990. *Distribution and Taxonomy of Birds of the World*. New Haven.
Slikas B., Sheldon, F. H., & Gill, F. B. 1996. Phylogeny of titmice (Paridae). 1. Estimate of relationships among subgenera based on DNA-DNA hybridisation. *J. Avian Biol.* 27: 70-82.
Snow, D. W. 1997. Should the biological be superseded by the phylogenetic species concept? *Bull. BOC* 117: 110-121.
Stebbins, D. L., & Day, A. 1967. Cytogenetic evidence for long continued stability in the genus *Plantago*. *Evolution* 21: 409-428.
Street, F. A. 1981. Tropical Palaeoenvironments. *Prog. Phys. Geography* 5: 157-185.
Taberlet, P. 1998. Comparative phylogeography and postglacial colonisation routes in Europe. *Mol. Ecol.* 7: 453-464.
Thielcke, G., & Zimmer, U. 1986. Early experience determines the song of the chiffchaff (*Phylloscopus collybita*). *Ethology* 73: 191-196.
Tokeshi, M. 1999. *Species Coexistence: Ecological and Evolutionary Perspectives*. Oxford.
Vaurie, C. 1951. Adaptive differences between two sympatric species of nuthatches (*Sitta*). *Proc. Int Orn. Congr.* 10: 163-166.
Weiner, J. 1995. *The Beak of the Finch*. London.
Williams, M. A. J., Dunkerley, D. L., de Deckker, P., Kershaw, A. P., & Stokes, T. 1993. *Quaternary Environments*. London.
Witherby, H. F., Jourdain, F. C. R., Ticehurst, N. F., & Tucker, B. W. 1938-41. *The Handbook of British Birds*. vols. 1-5. London.
Wynne, G., Avery, M., Campbell, L., Gubbay, S., Hawkswell, S., Juniper, T., King, M., Newbery, P., Smart, J., Steel, C., Stone, T., Stubbs, A., Taylor, J., Tydeman, C., & Wynde, R. 1995. *Biodiversity Challenge* (2nd edn). RSPB, Sandy.
Wynne-Edwards, V. C. 1948. The nature of subspecies. *Scot. Nat.* 60(3): 195-208.
Zink, R. M. 1997. Species concepts. *Bull. BOC* 117: 97-109.
— & McKitrick, M. C. 1995. The debate over species concepts and its implications for ornithology. *Auk* 112: 701-719.

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Glossary of terms

The most important terms used in this paper are explained below.

allopatric: referring to a situation where the geographical distributions of two taxa do not overlap (e.g. they do not breed in the same place at the same time)

chromosome: the huge molecular structures carried within all cells, consisting of DNA (the genes) and protein packaging. All cells have two sets of chromosomes, one from each parent. Within a species, all individuals have the same sets of chromosomes, and the same genes are carried in the same place on each chromosome – necessary for the interaction of chromosomes during production of sperm and egg. Different species often (not always) develop different numbers of chromosomes, and the genes are moved around between chromosomes, so hybrids often have 'unbalanced' chromosome sets; when a hybrid (with different sets of chromosomes from each parent) tries to produce eggs or sperm, necessary pairing and interaction of the chromosomes cannot occur, and inviable sperm or eggs may be produced

cladistics: a branch of taxonomy which groups organisms together solely and formally on the basis of evolutionary relatedness, inferred from the presence of new shared characteristics which were not present in ancestral forms.

cline: description given to the situation where some/all of the characteristics of a species change smoothly across its geographical range (so that individuals at the extremes of the range can be quite different, but it is impossible to draw a meaningful boundary line between the two forms)

convergent evolution: the evolving of similar body plans or body parts by distantly related organisms because they share similar modes of life or are designed to do the same jobs (e.g. penguins Spheniscidae and auks Alcidae)

discrete polymorphism: the situation where individuals of a species (of same age and sex) can occur in two or more different forms in the same place at the same time, with no intermediates between them (e.g. 'brown' and 'black' plumages of breeding male Pied Flycatchers *Ficedula hypoleuca*)

divergent genealogy: the type of genealogy represented on an evolutionary tree (e.g. fig. 1 on page 4) which describes populations of individuals (species in this case) which cannot interbreed to form a complicated network; see reticulate genealogy

gametes: ova and sperm

gene flow: trendy term for what happens when two different taxa interbreed such that their genes start to get mixed up

genetic marker: a bit of DNA (it may or may not be a gene) which differs between two or more related species and can be used by molecular biologists to detect hybridisation and DNA rearrangement

genome: term used for the complete DNA of an organism

introgression: see gene flow

monophyletic: descended from a single ancestor

morphological: relating to body shape; also taken to include body size and colour patterns

outcrossing: the opposite of inbreeding: a Welsh Red Kite *Milvus milvus* which mates with a vagrant German one is doing this

parapatric: term used when the geographical ranges of two taxa meet, and overlap only slightly (e.g. Hooded and Carrion Crows)

paraphyletic: explained in Box 2 (page 19); term used for a grouping of organisms which are clumped together taxonomically but, although all are descended from a single ancestor, some of the descendants of that ancestor are left out of the grouping (the Class of animals known as reptiles is a paraphyletic grouping, because the birds are left out and put in a Class of their own)

parsimony: 'Maximum parsimony' is the name given to the protocol by which, after sequencing DNA or proteins from different organisms, an evolutionary tree is drawn up showing the relationship between the organisms, assuming that the least possible number of mutational changes has occurred, i.e. that the simplest answer is likely to be the most accurate

phylogeny: the evolutionary history of a species or subspecies

postzygotic: after fertilisation of the egg; a postzygotic barrier to hybridisation means that the sperm of one species can fertilise the egg of another, but that either the resulting embryo dies or the hybrid is so unfit that it cannot survive in the wild (or it cannot breed successfully in the long term)

prezygotic: before fertilisation of the egg; a prezygotic barrier to hybridisation means that either the two potentially hybridising species never mate, or the sperm of one species cannot fertilise the egg of the other

protospecies: biological slang, incorrectly used to indicate a species at an early stage of evolution

reticulate genealogy: term used when drawing a family tree within a species, where every individual is potentially capable of breeding with every other. Graphically shown by drawing four individuals A, B, C & D on the back of an envelope: in the first generation, draw a tree such that A breeds with B to produce E and F, and C breeds with D to produce G and H; in the next year, A breeds with H, B with D, C with F, E with G, etc.; the complex network of interactions is a reticulate genealogy

sympatric: term used when two taxa live in the same area at the same time

taxon (pl. taxa): literally an 'arrangement', a group of organisms bunched together for taxonomic purposes; in the context of this paper, it it generally used in place of the more clumsy 'species or subspecies'

Waders with non-breeding plumage in the breeding season

R. J. Chandler and J. H. Marchant



Killian Mullarney

Short-billed Dowitcher *Limnodromus griseus* in first-summer plumage

ABSTRACT Why do some waders not acquire breeding plumage, but apparently retain non-breeding plumage during the breeding season? With some wader species it is usual for a significant proportion, or even most of the population, not to breed in their first summer; in other cases, non-breeding-type plumage is the result of individuals being, for various possible reasons, 'unfit' to breed. Illustrations are presented of waders in such plumages, including the 1981 Frodsham, Cheshire, Stilt Sandpiper *Micropalama himantopus* and the 1997 Musselburgh, Lothian, Western Sandpiper *Calidris mauri*. In view of this phenomenon, caution should be exercised in using the lack of breeding plumage to aid wader identification.

The occurrence of waders in non-breeding (or winter) plumage during the breeding season, typically in the period April-July, is, on the face of it, a puzzle. The phenomenon is, of course, likely to be noticed only with those species that have distinctly different breeding and non-breeding plumages, particularly some of the calidrids and the Tringinae.

Jukema & Piersma (2000) recently reconfirmed that it is simplistic to classify post-juvenile plumages of waders as either non-breeding ('basic') or breeding ('alternate' or 'supplemental'). Ruff *Philomachus*

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pugnax, Bar-tailed Godwit *Limosa lapponica*, and probably other species with bright colours in full breeding plumage, actually have three generations of feathers per year. In the case of the Ruff, a generation of striped feathers (the 'alternate' plumage), gained before the birds leave Africa in spring, is replaced at migration staging areas by the large and colourful feathers of the 'supplemental' plumage. Jukema & Piersma (2000) noted the similarity of the striped feathers to the underpart pattern of many waders which have relatively dull breeding plumages, such as many *Tringa* species and the curlews *Numenius*, and suggested that these plumages are homologous.

The term 'breeding plumage' is used here to refer to the relatively brightly coloured plumage that has evolved for display or crypsis on the breeding grounds, as opposed to the usually plain, dull 'non-breeding plumage'. For species in which a 'supplemental' plumage is normally obvious when breeding, our 'non-breeding' encompasses birds in 'alternate' plumage. Since all the examples that are presented relate to northern-hemisphere species, the terms 'summer' and 'breeding season', and 'winter' and 'non-breeding', are effectively interchangeable.

The purpose of this article is to discuss when and why waders may occur in non-breeding plumage during the breeding season, and to present some photographic illustrations of this phenomenon.

First-summer non-breeding-type plumage

Many wader species breed in their first summer, and consequently acquire breeding plumage, although it remains possible that some individuals may breed without doing so. Typically, first-summer breeders may be distinguished (if only in the hand) from adult summer individuals by the fact that they retain at least some worn juvenile feathers, most frequently those innermost median coverts that are normally hidden by the scapulars.

Much has still, however, to be learnt concerning the age at which waders first breed, something which apparently varies to a surprising extent, even among closely similar species. For example, most Little Stints *Calidris minuta* are thought to breed (and thus are likely to acquire breeding plumage)



Richard Chandler

11. Probable adult Great Knot *Calidris tenuirostris*, Western Australia, late March 1995. Although first-year birds apparently do not return to the breeding area, but spend the northern summer in tropical parts of the non-breeding area (Hayman *et al.* 1986), it is too early in the year to assume that this individual will not eventually acquire full breeding plumage.



Richard Chandler

12. First-summer Dunlin *Calidris alpina* of race *hudsonia*, Texas, USA, mid April 1994. The fine flank streaking is typical of this race in non-breeding plumage. The extensively worn wing-coverts, together with lack of any breeding plumage (either on upperparts or on breast/belly), suggest that this is a rather unfit bird that will spend the breeding season south of the breeding grounds.



Richard Chandler

13. First-summer (or possibly adult) Red Knot *Calidris canutus*, California, USA, mid April 1992. Retarded moult, with worn wing-coverts, missing tertials, but some fresh plain grey non-breeding scapulars. Like the Dunlin *C. alpina* in plate 12, will probably spend the breeding season on its wintering grounds or, at least, well south of the breeding area. The breeding-plumaged bird in the background is a Grey Plover *Pluvialis squatarola*.



Richard Chandler

14. Common Redshank *Tringa totanus*, unaged but perhaps most likely first-summer, Kent, early May 1985. Largely in fresh plumage, but lacking any of the dark (often rather random) upperpart and underpart feathers that characterise breeding plumage. This is likely to be an individual that will not breed, but, since British Common Redshanks typically gain fewer breeding-type feathers than do those elsewhere in the species' range, this may be a borderline case, possibly a dull breeding female.

in their first summer (Cramp & Simmons 1983: 305), while it seems that a large proportion, perhaps all, of the population of the closely related Red-necked Stint *C. ruficollis* does not do so. The former species typically attains breeding plumage in the first summer; the latter, on the other hand, acquires a first-summer plumage resembling that of a non-breeding adult, but with a small number of darker breeding-type feathers (Higgins & Davies 1996). In the case of Semipalmated Sandpipers *C. pusilla*, while the majority of the population will breed, significant numbers nonetheless remain in their South and Central American wintering areas during their first summer, when they are generally in non-breeding plumage (Phillips 1975). Similarly, a proportion of Western Sandpipers *C. mauri* remain on or near their southern wintering areas throughout their first summer; again, the first-summer plumage of these individuals is often little different from the non-breeding plumage (Cramp & Simmons 1983; Jonsson & Grant 1984).

Another species to which the same conclusions apply is the Short-billed Dowitcher



P.Wheeler

15. Stilt Sandpiper *Micropalama himantopus*, Frodsham, Cheshire, 24th April 1984. This individual with its damaged leg has non-breeding-type plumage, perhaps associated with its injury. Heavily worn wing-coverts contrast with fresh winter-type scapulars. By this date, Stilt Sandpipers with breeding intentions have virtually complete breeding plumage.

Limnodromus griseus, many of which summer in Florida, well south of their breeding range, and also do so in non-breeding first-summer plumage (Loftin 1962).

Some of these non-breeding-plumaged individuals may move north towards their breeding grounds. Recent Australian studies (Minton 2000, and *in litt.*) have shown that there is a wave of late-departing northbound waders, the majority in first-summer non-breeding plumage, including Red-necked Stints and Curlew Sandpipers *C. ferruginea* moving from Victoria to the northern part of Western Australia, and Terek Sandpipers *Xenus cinereus* and Greater Sand Plovers *Charadrius leschenaultii* departing northwards from Broome, Western Australia. These birds show weight gains prior to departure, although it is considered unlikely that their excursions take them as far as the breeding grounds.

In summary, therefore, it is usual for waders not breeding in their first summer to have non-breeding plumage from about November of their first calendar-year until about March-April of their third calendar-year, when they finally acquire breeding plumage.

The development of avian breeding plumage is triggered by seasonal hormonal changes. Piersma & Jukema (1993) showed how a bright display of 'supplemental' breeding plumage may be an indicator of prime physical condition. In the case of birds that are injured or unfit, these hormonal changes either do not occur, or have little effect, and such individuals may also have a non-breeding plumage during the breeding season. They are unlikely to breed, and, as with immature non-breeders, they may also remain on or near their wintering grounds.

In Britain, waders in non-breeding plumage occasionally appear in July, simultaneously with the first returning post-breeding individuals. It is not clear whether these duller individuals are also returning from the breeding grounds, or whether they summered elsewhere.

Two notable examples

One example of a wader exhibiting a non-breeding first-summer plumage was provided by a Stilt Sandpiper *Micropalama himantopus*, present at Frodsham, Cheshire, from mid April to early October 1984, which



Roger Walsh

16. Stilt Sandpiper *Micropalama himantopus*, Frodsham, Cheshire, date unknown. The same individual as in plate 15. Later in the season, this bird acquired a few dark breeding-type upperpart feathers, and some barring on the underparts, but far less than in full breeding plumage.



Richard Chandler

17. Ruff *Philomachus pugnax*, second-winter or possibly older, Kent, mid August 1981. This is a very early date for a breeding adult to have moulted so completely to non-breeding plumage, so it can probably be aged as second-winter. A full adult will acquire a similar plumage, but is unlikely to do so until October/November, although it remains a possibility that this individual is an early-moulting failed breeder.

had a damaged right leg (*Brit. Birds* 77: 334; 78: 594). The majority of Stilt Sandpipers develop full breeding plumage in their first summer, though a small number do not (Cramp & Simmons 1983). Perhaps as a consequence of its injury, this individual was in plain non-breeding plumage at the end of April (plate 15), although it later acquired a few dark breeding-type upperpart feathers and developed some restricted barring on the underparts (plate 16).

A second and even more instructive instance concerned the Western Sandpiper at Musselburgh Lagoons, Lothian, in August 1997 (plate 18). This individual showed few characters to distinguish it from the closely related Semipalmated Sandpiper. Subsequently, in discussing the credentials of this bird, the British Birds Rarities Committee (BBRC) reported that it 'had completed its moult into winter plumage, the timing of which was a good two months too early for Semipalmated' (*Brit. Birds* 91: 474). This statement is a reasonable summary of the position regarding southbound migrants of the two species in North America, where, particularly in late August and September, it is not uncommon to see juvenile Western Sandpipers moulting to first-winter plumage and apparent adults already largely in non-breeding plumage. In contrast, practically all Semipalmated Sandpipers migrate south in juvenile or in worn adult summer plumage, the body moult being completed only on the wintering grounds (Cramp & Simmons 1983). Both of these species moult to non-breeding plumage largely after migration, unlike, for example, the Purple Sandpiper *C. maritima*, which typically moults to non-breeding plumage before making long-distance southward movements.

Although the timing of moult out of breeding plumage is a potentially useful aid for separating autumn Western and Semipalmated Sandpipers, it is quite possible for individuals of either species to assume a non-breeding-type plumage in spring, and for the second-winter plumage to be acquired considerably earlier in the year than that of adult non-breeding. Further, it cannot be guaran-



Gary Bellingham

18. Western Sandpiper *Calidris mauri*, Musselburgh, Lothian, August 1997. Moulting to non-breeding plumage: the early date for this plumage suggests that this is a first-summer individual. A Semipalmated Sandpiper *C. pusilla* of this age, and which has not bred, could be in similar plumage.



Richard Chandler

19. First-summer/second-winter Red Knot *Calidris canutus*, Texas, USA, early August 1992. This is probably an individual that had summered well south of the breeding area, and as a consequence is well advanced towards non-breeding plumage. Compare with the Red Knot in plate 13, which it probably would have resembled three to four months earlier.

teed that individuals found outside their normal range will be following the expected moult schedule. Thus, the timing of moult is, in fact, of limited practical value as a means for separating the two species.

The observation at Musselburgh, on 12th June 1997, of a winter-plumaged stint that was possibly the same bird (*Brit. Birds* 91: 474) lends additional support to the suggestion that the Western Sandpiper was a first-summer individual or a sick adult, further demonstrating that this plumage is of no particular value for the identification of lone vagrants. All that can be concluded from the moult state is that a stint in breeding plumage in September is more likely to be a Semipalmated than a Western Sandpiper.

A further possible mechanism

Occasional vagrant waders in extreme southern latitudes have been observed to be in breeding plumage at a time closer to the southern summer than to the species' breeding season in the northern hemisphere. Examples include several Little Stints: one on South Georgia in December 1977 (Hayman *et al.* 1986); and another, at Werribee, in Victoria, Australia, in one November in the early 1980s, and what was presumed (since it was ringed) to be the same individual in a subsequent austral summer. Other Little Stints in Australia, several of which have been caught, have been in perfectly normal plumage for the time of year (C. D. T. Minton *in litt.*). Again in Australia, Red-necked Phalaropes *Phalaropus lobatus* have also been noted in breeding plumage in the austral summer, including two in December in Victoria (Higgins & Davies 1996) and one on Rottnest Island, Perth, in October 1994 (R. H. Loyn *in litt.*). Similarly, occasional unseasonal waders in bright breeding plumage are seen among winter flocks on British estuaries.

If any of these birds are following a time-shifted but otherwise normal sequence of plumages and movements, such individuals may perhaps also be seen in non-breeding plumage during the British summer. Unseasonal breeding plumage is a phenomenon requiring more detailed investigation.

Photographs

Examples of waders with non-breeding summer plumages are presented in plates 11 to 20. As might be expected from the fore-



Richard Chandler

20. First-summer/second-winter Surfbird *Aphriza virgata*, California, USA, early September 1984. Surfbirds breed in Alaska, but winter along the western seaboard of the Americas south to southern Chile. This individual, given the completeness of its non-breeding plumage on this date, and the locality in its wintering range far south of the breeding area, is presumed to be in its second calendar-year.

going discussion, a number of the photographs were taken in the wintering areas, where non-breeding individuals are most regularly found during the breeding period. These photographs show, in seasonal sequence, Great Knot *Calidris tenuirostris*, Dunlin, Red Knot *C. canutus*, Common Redshank *Tringa totanus*, the Frodsham Stilt Sandpiper, Ruff, the Musselburgh Western Sandpiper, another Red Knot, and Surfbird *Aphriza virgata*. Detailed discussions are given in the accompanying captions.

Between them, the photographs provide examples from the range of variation of non-breeding-type plumage normally to be expected, including spring and late-summer birds. Of particular interest is the Frodsham Stilt Sandpiper, shown at the end of April and again later in the summer, illustrating the plumage progression of a particular individual. Most of the photographs are of waders in their second calendar-year.

Acknowledgments

The authors are grateful to Dr Nigel Clark for his comments on an earlier draft.

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References

Cramp, S., & Simmons, K. E. L. (eds.) 1983. *The Birds of the Western Palearctic*. vol. 3. Oxford.

Hayman, P., Marchant, J., & Prater, T. 1986. *Shorebirds: an identification guide to the waders of the world*. London & Sydney.

Higgins, P. J., & Davies, S. J. J. F. (eds.) 1996. *Handbook of Australian, New Zealand and Antarctic Birds*. vol. 3. Melbourne.

Jonsson, L., & Grant, P. J. 1984. Identification of stints and peeps. *Brit. Birds* 77: 293-315.

Jukema, J., & Piersma, T. 2000. Contour feather moult of Ruffs *Philomachus pugnax* during northward migration, with notes on homology of nuptial plumages in scolopacid waders. *Ibis* 142: 289-296.

Loftin, H. 1962. A study of boreal shorebirds summering on Apalachee Bay, Florida. *Bird-Banding* 33: 21-41.

Minton, C. 2000. Age structures and late departures [of waders] in NW Australia. *The Tattler* 24: 2.

Phillips, A. R. 1975. Semipalmated Sandpiper: identification, migrations, summer and winter ranges. *Amer. Birds* 29: 799-806.

Piersma, T., & Jukema, J. 1993. Red breasts as honest signals of migratory quality in a long-distance migrant, the Bar-tailed Godwit. *Condor* 95: 163-177.



Gordon Trunkfield

Roof assemblies of lapwings and plovers in Britain

N. Calbrade, C.A. Entwistle, A.J. Smith and K.G. Spencer

ABSTRACT The use of the large roof areas of commercial and industrial premises for daytime roosting by Northern Lapwings *Vanellus vanellus* and European Golden Plovers *Pluvialis apricaria* is a relatively new phenomenon, confined mostly to northern England.

Daytime assembly by Northern Lapwings *Vanellus vanellus* and European Golden Plovers *Pluvialis apricaria* on the roofs of warehouses and commercial and industrial premises has been noted in Greater Manchester since 1984, and possibly since 1972. It was first observed in the Rochdale area, but has since been recorded also in the boroughs of Bolton, Bury, Oldham, Salford, Stockport and Wigan. At least 16 sites have been used, and flocks have comprised up to 600 birds (*Birds in Greater Manchester*, 1984-99). Recent studies have analysed the characteristics associated with this type of behaviour. Entwistle (1999) collected data from sites in the Greater Manchester area, including the bird species present; the dimensions of the

buildings, and whether they were heated; roof characteristics, including slope, height from ground, material used, colour, and whether moss or mud was present; proximity to the nearest large fields; and the birds' known feeding area. He also suggested possible reasons for the behaviour. In an intensive study, Calbrade (2000) looked at the behaviour of the birds at one assembly site, in an attempt to understand why Northern Lapwings have taken to roosting on roofs as opposed to their more traditional field roost sites, testing the hypotheses that rooftop roosting offers protection against predators, shelter from the prevailing wind, and thermal advantage.

This habit was noted in Leeds in 1993 (Lunn 1999), and has since been recorded in Bradford (West Yorkshire), Burnley and Darwen (Lancashire), Bennerley Marsh, near Ilkeston (Derbyshire), and Washington, Birtley and Newton Aycliffe (Tyne & Wear). Away from northern England, we have been informed of just two other locations where it has been observed: Talke, near Kidsgrove (Staffordshire), where a superstore roof was used until demolition, and Basingstoke (Hampshire), where up to 200 birds have used factory rooftops on an industrial estate at Houndmills intermittently for at least 15 years. This last site was one of only seven where mixed flocks of Northern Lapwings and European Golden Plovers have been noted, the others being in Greater Manchester and Tyne & Wear. There is just one recorded instance of a roof assembly in Scotland: on 27th October 1999, a flock of about 150 Northern Lapwings was on the roof of a warehouse near the A80 at Cumbernauld (Clyde), and a further 60 or so individuals were observed flying in, apparently to join the flock. It is possible that other sites have been overlooked, not being in prime birdwatching habitat.

The birds are present on roofs from early July to March, with the highest numbers from September to February. They appear to be quite tolerant of proximity to human activity, traffic or noise from industrial processes within the buildings. This tolerance results in conservation of energy during their inactive period to a greater extent than would be the case at ground roosts, where disturbance, for whatever reason, is greater; on roofs, the birds are secure from ground predators. Several assemblies are in busy town centres, where a number of roofs may be used for sleeping, idling and preening by the same flock over a long period. Grey asbestos corrugated roofing is commonly used, even where the pitch is quite steep, and it may be that its slightly gritty surface gives a better grip than do the newer metal corrugates. Entwistle (1999) referred to the statement by Klomp (1954) that Northern Lapwings prefer to nest in fields that are brown or grey in appearance, and suggested that the choice of grey roofs (92% of those studied) may be related to this preference. New roofs have been utilised quickly: in Rochdale, a grey corrugated roof constructed in September 1999 was occupied within three months, perhaps because it was 1.5 km closer to the presumed feeding grounds than was the site used previously. Spencer (1997) noted that assemblies on roofs begin as early as the second week in July, transferring there from fields used from mid June for post-breeding assemblies, and made the suggestion that the commencement of moult may be the trigger for removal to the roofs, which offer more security and less likelihood of disturbance. By September, substantial numbers are on the roofs, and these probably also include arrivals from areas farther north.

In winter, the lapwings and plovers arrive just after sunrise, and depart in groups at intervals of three to four minutes, about 40 minutes after sunset, to feeding grounds which may be 4 km or more away (Spencer 1997). In a study of one site during 08.30-16.30 GMT over nine days in January 2000, Calbrade (2000) found that 87.5% of the birds arrived from an easterly direction, and 62.5% departed in a southerly direction. They became restless and called more as dusk approached. More work does, however, need to be done to determine the relationship between roost sites and feeding areas. Owing to the heavy traffic normally present in town centres, and visual obstructions, it is difficult to follow the flight lines of the birds when they leave, and impracticable to follow them by car. Where mixed flocks of Northern Lapwings and European Golden Plovers have been involved (e.g. in the Bolton area), it has been easier – since the flocks can be identi-



Neil Calbrade

21. Northern Lapwings *Vanellus vanellus* on rooftop, Rochdale, Greater Manchester, January 2000.

fied individually by their composition – to make a connection between the flocks on regularly used fields and those in roof-assembly areas.

Some of the suggestions put forward to explain rooftop assemblies include safety from ground predators, some protection from inclement weather (by moving onto whichever roof slope is most sheltered and by standing in the lee of roof 'furniture', such as ventilation cowls), warmth from heat transmitted through the roof from the building, the general higher ambient temperatures found in conurbations, and loss of traditional assembly sites. In urban areas, the reduction of available ground-roosting sites, owing to the inexorable loss of fields and other open land to development, may be the chief reason for the switch to rooftop assemblies. There has not, however, been a commensurate reduction in the numbers of ground predators such as the Red Fox *Vulpes vulpes*, and the need to conserve energy by finding disturbance-free roosting space may also be an important factor. Large roofs with good all-around visibility are usually chosen and may be shared with gulls *Larus* and Common Starlings *Sturnus vulgaris*, although these other species spend much shorter periods on the roofs. Entwistle (1999) found that the average area of roof space used was 17,300 m², although roofs varied from 400 m² to 350,000 m², and the height above ground varied from 7 m to 20 m, although 7 m was the commonest height. The short study by Calbrade (2000) suggested that the temperature needed to fall to 1°C or less (either air temperature or, because of wind, the chill factor) before the birds moved to the leeward side of a roof. Observations on the use of roof furniture and heating ducts were inconclusive in his study, although such behaviour was noted at other sites. Other measures used by Northern Lapwings to conserve heat were: standing on one leg (33%) and tucking the bill into the scapulars (24%). Only 0.08% sat down on the roof.

In line with the findings of the 1998 BTO survey of breeding Northern Lapwings (Wilson 1999), there is evidence that the sizes of rooftop flocks have decreased by approximately half at those sites where such flocks have been present for ten years or more (C. Owen verbally).

Northern Lapwings have been recorded breeding on a factory roof at Hazel Grove, Stockport, in 1981 (Holmes 1981; D. Ousey verbally; G. D. Yates verbally), and reputedly on a flat roof of a Victorian mill building in Castleton, Rochdale, from the 1970s to the 1990s, although not in 2000, when the site was visited by AJS. In 1998-2000, one or two pairs bred on two adjoining sloping corrugated roofs in central Rochdale, rearing chicks in the trough, where, presumably, enough invertebrate food had accumulated. In 1999, Northern Lapwings were acting ter-

ritorially at sites in Walkden and Ashton-in-Makerfield where it was impossible to view the surface of the roofs. Also in 1999, in Bolton and Chadderton, pairs bred on lawns in the same warehouse complex as the roost site (D. Elsey verbally; P. Francis *in litt.*).

Future work could incorporate further study of the behaviour of these birds within rooftop assemblies. Colour-ringing of Northern Lapwings would help in the identification, and subsequent protection, of the feeding areas of flocks roosting on roofs.

Acknowledgments

We should like to thank the following for providing information, either in correspondence or verbally, on rooftop flocks: J. Anderton, A. Armstrong, P. Berry, P. Brewster, A. M. Broome, D. P. Broome, J. Canovan, N. Carter, A. Clamp, K. Clarkson, D. Crawley, C. Davies, E. Davis, G. Dicken, F. Duff, D. & S. Elsey, F. Fouracre, P. Francis, A. Fuller, S. Gillings and BTO staff, W. J. Halton, F. Hardman, P. Hill, S. H. Hind, R. Hirst, Mr & Mrs J. Howarth, P. Johnson, M. Jones, P. Jones, M. Keighley, D. Kelsall, R. Key, E. King, L. Lathom, G. Lightfoot, A. W. Martin, B. Martin, S. J. Martin, P. M. Miller, A. J. O'Neill, D. Ousey, C. Owen, S. Ratcliffe, M. Rayment, C. M. Richards, A. Rimmer, A. Ryder, B. T. Shaw, A. Surtees, S. Suttill, A. Warburton, J. Webb, J. A. Wilkinson, and G. D. Yates.

References

Calbrade, N. 2000. *Rooftop Lapwing assemblies: a study into their behaviour*. Unpubl. dissertation, Bishop Burton College.

Entwistle, C. A. 1999. *Characteristics of roof-top roosting in Lapwing* (Vanellus vanellus) *and Golden Plover* (Pluvialis apricaria) *in Greater Manchester*. Unpubl. dissertation, Manchester Metropolitan University.

Holmes, R. 1981. Roof nesting Lapwings. *Birds in Greater Manchester* 1981: 6-7.

Klomp, H. 1954. De terreinkus van de Kievit *Vanellus vanellus* (L.). *Ardea* 42: 1-139.

Lunn, J. 1999. Northern Lapwings resting on urban roof. *Brit. Birds* 92: 368.

Spencer, K. G. 1997. Rooftop assemblies of Lapwings. *East Lancs. Orn. Club Annual Report* 1997: 59-60.

Wilson, A. 1999. Tumbling Lapwing populations. *BTO News* 224: 14.

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Looking back

FIFTY YEARS AGO: TEMMINCK'S STINT IN CAMBRIDGESHIRE IN MARCH. A very small wader in the company of a party of Redshank (*Tringa totanus*) was observed at the sewage farm, Cambridge, on March 17th, 1950. We approached within 50 yards of the bird, one observer using Ross ×6 and the other ×8 binoculars and each watcher examined the bird with the aid of a ×40 telescope.

'Careful comparison with Redshank suggested an approximate length of 5-6 inches [13-15 cm] and the bird was of such a height as to be able to pass between a Redshank's legs. The upper parts were grey, streaked with darker markings; the under parts pure white except for the upper breast which was finely streaked grey-buff, this area ending with a fairly sharp line of demarcation. There was a light superciliary stripe and the forehead was white. The tail of the bird at rest was seen through the telescope to be narrowly edged white, while the rest of the tail was dark brown. The bill was short, straight and black and the legs very dark (possibly muddy!). 'Careful consideration of our field notes suggests that the bird was a Temminck's Stint (*Calidris temminckii*), in spite of the very early date. A.S.T. had had previous experience of observing this species and was confident of identification, although we would have desired confirmation in the form of call and flight observations. A. S. Thom and E. Crackles.' (*Brit. Birds* 44: 31; January 1951)

TWENTY-FIVE YEARS AGO: 'In recent years Dutch Elm Disease has been wreaking havoc among elm trees [*Ulmus*] in the British countryside; and a recent Forestry Commission report shows that there is no sign of the outbreak abating. Aided by the hot summer, a further 1.9 million elms became afflicted in 1975, and 6.5 million elms have now been killed, which is perhaps 25% of the total. As a consequence, the pastoral landscape is changing rapidly, and fears are being expressed whether the elm can survive in Britain. While the disease may in the short term benefit insectivorous birds which occupy the tree-bark feeding niche (such as woodpeckers and the Treecreeper [*Certhia familiaris*]), birds which use elms as nesting sites (e.g. Kestrel [*Falco tinnunculus*], Tawny [*Strix aluco*] and Little Owls [*Athene noctua*], and Rook [*Corvus frugilegus*]) are likely to be faced with problems.' (*Brit. Birds* 69: 41; January 1976)

Young Ornithologists of the Year 2000

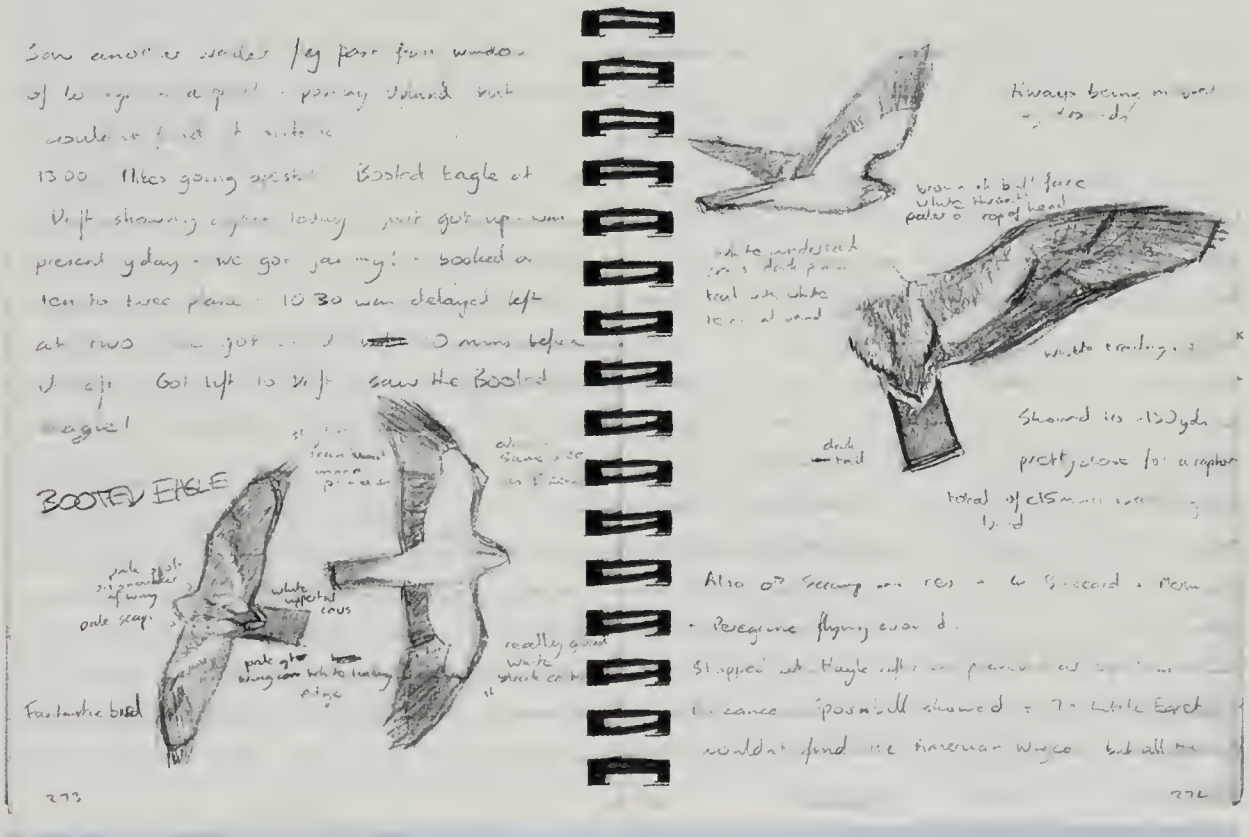
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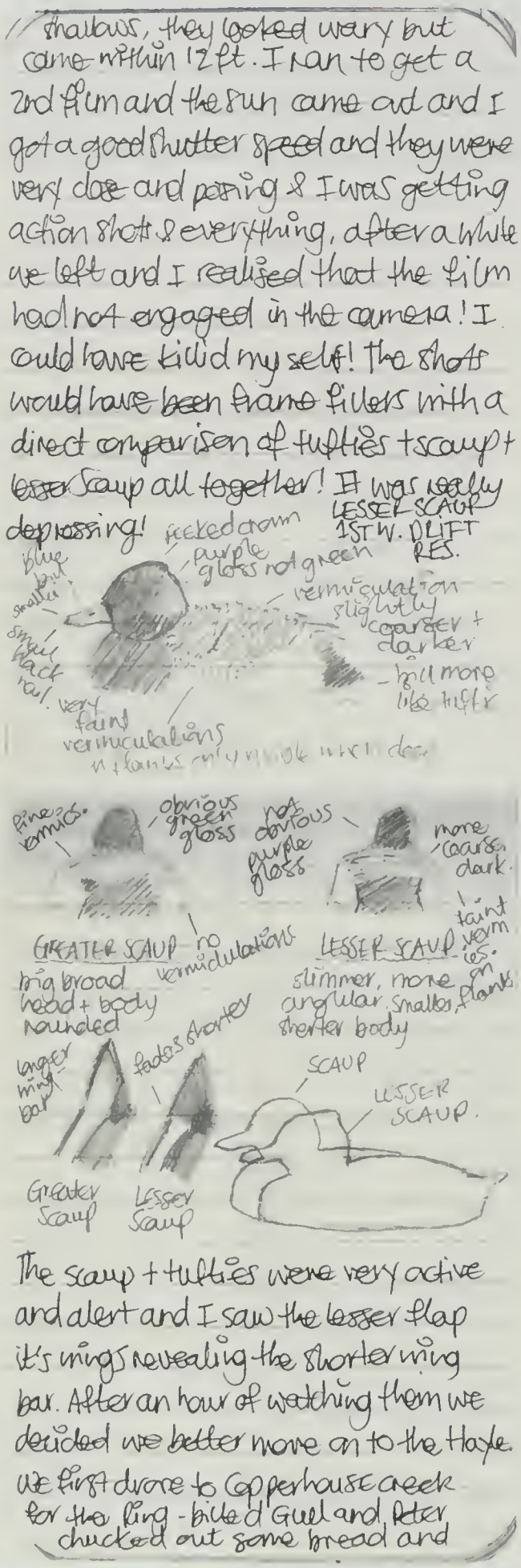
This annual competition requires entrants to submit their field notebooks for the current year, as well as any other more-permanent records of fieldwork. The judging panel convened for an enjoyable day's deliberation at the end of October last year. As ever, it was inspiring to see the diligence and the amount of time that are spent on the entries. The winners and runners-up were as follows:

SENIOR 18-21 years	**1st Robert Martin** (Beeston, Nottinghamshire)
INTERMEDIATE 15-17 years	**1st Jack Wylson** (Lowestoft, Suffolk) = 2nd Stuart Piner (Lancashire) = 2nd Ashley Saunders (Norfolk)
JUNIOR 14 years and under	**= 1st Anthony Price** (Chelmarsh, Shropshire) **= 1st Loreen Chan** (Ealing, London)

The standard of the winning entries was again high, with particularly strong competition at junior level. There were also some familiar names amongst the winning entries. Senior winner Robert Martin was placed first in the intermediate category in 1999, and



Robert Martin – Senior winner

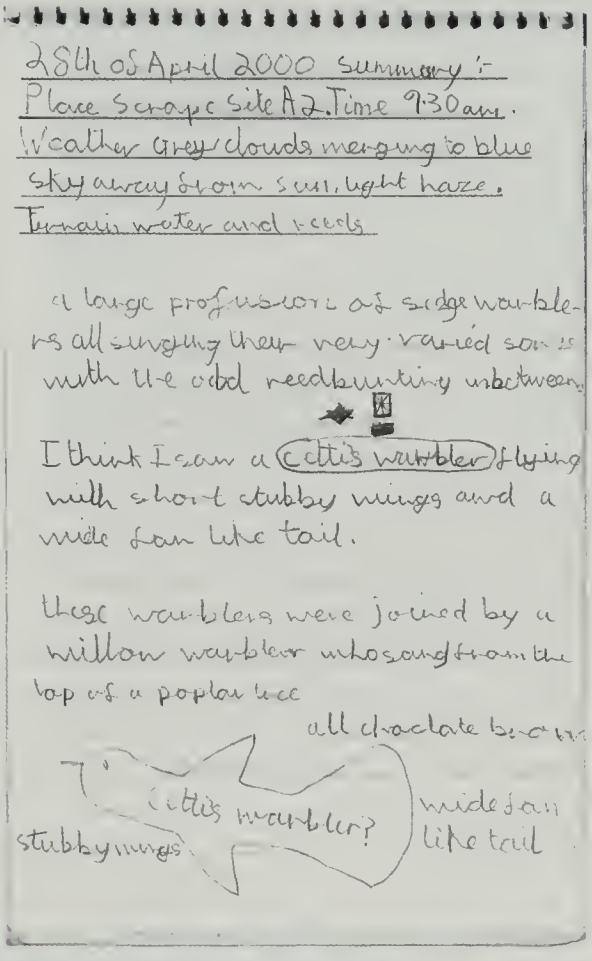


Jack Wylson – Intermediate winner

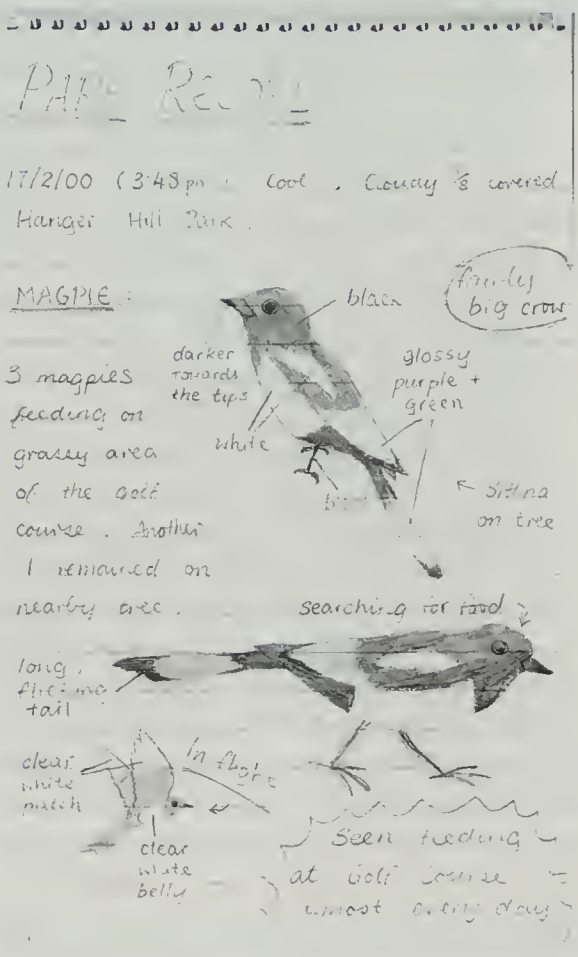
Anthony Price, joint winner at junior level, won outright in 1998 – an impressive achievement given that he is still three years short of the top of his age category.

The standard of entries in the junior category was extremely high. In the final reckoning, two entrants tied on points and were judged to be equally worthy winners, albeit with very different approaches. Loreen Chan submitted an immaculately kept record of field observations on common birds from her garden and local park in Ealing. This comprised well-observed descriptions of behaviour, calls and plumage, embellished with detailed, accurate pencil sketches. As one judge noted, 'Whatever the bird did, she wrote about it.' Anthony Price submitted his field notebook and two more-permanent collections of photographs, sketches and project work. His enthusiasm for survey work and research came across clearly – he participates in the BTO Breeding Birds Survey and regularly covers an RSPB Wildlife Explorers 'Wildsquare'. As one judge commented, 'He is asking some good questions, for example showing the initiative to contact the WWT with a query about the bill patterns of Bewick's Swans [*Cygnus columbianus*]'. The joint winners reflected the heartening levels of commitment and enthusiasm that were evident at this level.

Entries in the intermediate category offered a very different perspective, reflecting a predominant interest in rarities and twitching from those in this age category. Jack Wylson's entry stood out as being an exemplar of this type of approach: he submitted a classic 'policeman's type' field notebook crammed with anecdotes and descriptions, together with a neat written-up version. His thumbnail field sketches particularly impressed the panel for their accurate and original depiction of jizz. As one judge commented, 'Extraordinarily good rarity sketches – another Steve Votier?' (a reference to the senior winner in 1994,



Anthony Price – Junior equal 1st



Loreen Chan – Junior equal 1st

who has just been nominated for the BBRC). Although, like his counterparts, he travels widely in the UK to see birds, another plus point was the fact that he spends most of his time in his local area of coastal Suffolk. Indeed, his field notes included a description of the experience of co-finding a national rarity (Alpine Accentor *Prunella collaris*) at a local site.

At senior level, it was pleasing to see last year's intermediate winner, Robert Martin, maintaining the standard that he sets himself, with two field notebooks containing some good field sketches and descriptions. He achieved this despite the competition that he readily acknowledges with rival time commitments for A-levels – perhaps one of the major factors that has deterred more young birders of this age from entering the competition?

With the changing circumstances in which *BB* finds itself, the Young Ornithologists of the Year competition will not be run during 2001. The situation will be kept under review, and it is hoped that it may prove possible to run the competition again in the near future.

Guy Thompson (RSPB), J. T. R. Sharrock (BB), Jeff Baker (BTO), B. A. E. Marr (BOU) and Robert Gillmor (SWLA)
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Notes

Bare-part colours of juvenile hybrid Lesser Crested × Sandwich Tern

Following the recent description of hybridisation between Lesser Crested Tern *Sterna bengalensis* and Sandwich Tern *S. sandvicensis* in the Albufera de Valencia, Spain (Dies & Dies 1998), observations during 1998 give further information on the coloration of hybrid bare-part colours.

In 1998, for the fifth consecutive year, a Lesser Crested Tern (a female in this case) paired with a Sandwich Tern in a colony of 723 breeding pairs of Sandwich Terns. The single egg hatched on 31st May and the hybrid chick fledged on 2nd July. This offspring was observed at ranges of 26-87 m. Once fully feathered, its plumage matched the descriptions made of other hybrid chicks in previous years (see Dies & Dies 1998).

Successive observations of the bare parts showed progressive changes in their coloration. The first observation, made when the chick was ten days old, showed a pale yellow bill and flesh-coloured legs. Towards the end of June, the yellowish bill became progressively darker towards the base of the lower mandible, finally appearing to be sandy-brown or horn-coloured at the base. At the same time, the predominantly pale legs became progressively darker towards the upper end of the tarsus.

The last observation, on 7th July, showed an increased extension of the dark colour at the base of the lower mandible, together with the appearance of the same dark colour at the base of the upper mandible. The legs also showed a significant extension of dark coloration, but remained paler than the blackish legs of juvenile Sandwich Terns.

Recent observations, including those of Jiguet (1997), suggest, therefore, that first-winter hybrids may show progressively darker bill and legs from late summer onwards.

References

Dies, J. I., & Dies, B. 1998. Hybridisation between Lesser Crested and Sandwich Terns in Valencia, Spain, and plumage of offspring. *Brit. Birds* 91: 165-170.

Jiguet, F. 1997. Appearance of a first-autumn hybrid Lesser Crested x Sandwich Tern. *Birding World* 10: 427-428.

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Breeding by Horned Larks in southern Carpathians, Romania

The Horned Lark *Eremophila alpestris* breeds not only in the arctic tundra, but also on the grasslands of high mountains from central and southern Europe and Asia Minor to central Asia. In Romania, it was known only as a winter visitor until 1962, when a small breeding population was discovered in the Cindrel Mountains, in the southern Carpathians. On 16th July 1962, a family of two adults and three fledged juveniles was found on 'Platoul Frumoasei', adjacent to the Cindrel peak (Klemm 1963). The species was subsequently identified in summer at other places in the Cindrels (Zsivanovits 1972; P. Weber, unpubl. data), and two juveniles were ringed in 1972 (Zsivanovits 1972).

These observations prompted ornithologists to search for this species elsewhere in the southern Carpathians. As a result, Horned Larks were found in the breeding season both west and east of the Cindrels, in the mountains of Tarcu (Nadra 1966; Otto 1978), Parâng (juvenile collected and seven other birds observed: Popescu 1972), Lotrului (nest with three eggs and another with three young and one egg located: Klemm, in Klemm & Kohl 1988) and Bucegi (Klemm 1968; Rochlitzer 1977; Tălpeanu & Paspaleva 1978, 1979).

There was no further evidence of breeding by this lark in the Romanian Carpathians until 1995, when, on 4th July, DM observed three juveniles in the Urdele hollow in the Parâng Mountains, at about 1850 m, in the area where the species had been found in 1969 (Popescu 1972). In 1999, LSz photographed it in the same place, and Horned Larks, including juveniles and a nest



László Szabó

22. Horned Lark *Eremophila alpestris* of subspecies *balcanica*, Parâng Mountains, Romania, July 1999.

with eggs, were found in several other sites in the Parâng and the Bucegi Mountains. In August 2000, two pairs, one with three juveniles and the other with two, were observed by LSz in the Bucegi Mountains.

The discovery of the Horned Lark in the southern Carpathians in the 1960s would support the view that this species has undergone a recent range expansion in the mountains south of the Danube. Nadra (1966) was the first to point out that the population breeding in the Țarcu Mountains belonged to the Balkan subspecies *E. a. balcanica*, which is very like the subspecies *penicillata* from Asia Minor; the black stripe on the side of the neck is clearly visible in the field (*BWP*, vol. 5). Both field observations and photographs (plate 22) clearly demonstrate that the population breeding in the Parâng Mountains is also of the subspecies *balcanica*. We assume, therefore, that the Balkan population has recently expanded northwards, across the Danube, to the Carpathians.

Recent observations confirm that the Horned Lark is still breeding in the southern Carpathians, at least in the Parâng Mountains and the Bucegi Mountains. Searches in other high mountains in the region could produce many surprises in the future.

References

Klemm, W. 1963. Ciocârlia urecheată (*Eremophila alpestris*) pasăre clocitoare in Carpații Românești. *Natura (Biol.)* 15 (5): 91.

— 1964. Erster Nachweis über das Bruten der Ohrenlerche in der südischen Karpaten. *Aquila* 69-70: 253.

— 1968. Ein seltener Vogel unserer Karpaten. *Karpatenrundschau*, 5 July 1968.

— & Kohl, St. 1988. *Die Ornis Siebenburgens*. Bd. 3. Köln-Wien. pp. 225-227.

Nadra, E. 1966. Ciocârlia urechiată balcanică (*Eremophila alpestris balcanica* Reichenow). *Rev. Muzeelor* 3 (3): 250-252.

Otto, W. 1978. Aus der Vogelwelt des Retesat und Țarcu-Gebirges (S. R. Rumanien). *Falke* 25 (4): 128-132.

Popescu, M. 1972. Studiul avifaunei din Munții Parâng-Vulcan și depresiunea Petroșani. Unpublished PhD thesis, Universitatea București.

Rochlitzer, R. 1977. Ornithologische Beobachtungen in Bucegigebirge (S. R. Rumanien). *Falke* 24 (6): 204-206.

Tălpeanu, M., & Paspaleva, M. 1978. Contributions à la connaissance de l'avifaune des Monts Bucegi (Roumanie). *Trav. Mus. H. N. Gr. Antipa* 19: 335-341.

— & — 1979. Expansion récente de quelques espèces d'oiseaux en Roumanie. *Trav. Mus. H. N. Gr. Antipa* 20: 441-449.

Zsivanovits, P. 1972. Schița avifaunistică a regiunii Cindrel-Iezere. *Stud. com. Muz. Brukenthal, St. nat.* 17: 325-338.

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Letters

Separating Acrocephalus *and* Hippolais *warblers*

I found Colin Bradshaw's note of caution regarding the separation of *Acrocephalus* and *Hippolais* warblers (*Brit. Birds* 93: 277) most interesting. He placed particular emphasis on the perceived difficulties of separating Olivaceous Warbler *H. pallida* from Blyth's Reed Warbler *A. dumetorum*. Whilst I agree with much of what he wrote, I do feel that the potential confusion between these two species is overstated. I suggest that a far greater problem lies in the separation of Olivaceous Warbler from Booted Warbler *H. caligata* of the race *rama*, which can appear remarkably similar to Olivaceous in both structure and plumage tones.

I, too, doubt whether many field observers use length of undertail-coverts as a means of separating *Acrocephalus* and *Hippolais* warblers. I suggest that they are far more likely to rely on behaviour, jizz, head shape and tail shape, together with general coloration, to reach the correct identification.

The Olivaceous Warbler present on Fair Isle, Shetland, during 5th-13th June 1995 was, indeed, thought to be a Blyth's Reed Warbler when initially trapped, but such thoughts were quickly dispelled when the biometrics and plumage tones were properly noted. Surely the Observatory staff were more concerned that the putative Olivaceous just may have been a Booted Warbler of the race *rama*?

Having, together with Nigel Wheatley, found and identified one of the most recent British Olivaceous Warblers - on St Agnes, Scilly, during 24th September to 8th October 1998 - I have to say that Blyth's Reed Warbler never really entered our thoughts when confirming the identification. Nor did the length of the undertail-coverts influence the process, but instead we concentrated on behaviour, call, plumage, primary projection, tail shape (square-ended on *Hippolais* as opposed to the more rounded tail tip of *Acrocephalus*), head shape and bill shape.

Of the three Olivaceous Warblers that I have seen in Britain, all have shown rather obvious whitish edges to the outer tail feathers. All were a rather cold, strikingly pallid brownish-grey, appearing - at various times, depending on light and angle - either sandier or with a faint olive tone. Although Blyth's Reed Warbler can be a dull olive grey-brown, it essentially has the brown tones associated with unstreaked *Acrocephalus* warblers, and many, especially young birds in autumn, have rufous tones which are noticeable, if never quite approaching the intensity of the colour of Reed Warbler *A. scirpaceus*.

The differences between Olivaceous and Blyth's Reed are, in my experience, greater than was implied by Colin Bradshaw.

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The BPY Montagu's Harrier

The recent Bird Photograph of the Year (*Brit. Birds* 43: plate 171) was a superb action shot of a Montagu's Harrier *Circus pygargus*, described by the photographer, Alan Petty, as applying full 'airbrakes' with wings and tail fully extended before the dive. Actually, the bird was engaged in a more complex activity than simply braking. Yes, the left wing and the tail are fully spread, but not the right wing; this is in a raked posture which would effectively 'spill' air. So, what was the bird doing? A clue can be gained from looking at its head, which is clearly 'aimed' to the left. Indeed, with the wings as shown, the bird would be turning left, combined with braking. The left wing applies the brake, the right wing spills air, thus effecting the turn, and the tail provides additional fine-tuning to both braking and direction. I have seen identical wing action performed many times by Common Buzzards *Buteo buteo* as they change direction speedily at the end of a display stoop.

The bird is, of course, not a female, but a male, as already noted (*Brit. Birds* 93: 347).

Robin Prytherch
23 Caledonia Place, Clifton, Bristol BS8 4DL

News and comment

Compiled by Bob Scott and Wendy Dickson

Gull meeting in Portugal

Following four successful meetings in northern Europe (Germany, Denmark, Netherlands and France), the 5th International Gull Meeting (IGM) is now moving south, to Portugal. The dates are 29th March to 1st April 2001, and comfortable accommodation for 80 people has been secured in the Youth Hostel at Foz, Porto, with spectacular views over the mouth of the River Douro. The IGM was originally set up by Ronald Klein, in 1996, as an informal forum for discussion of pertinent issues surrounding the large gulls *Larus*, such as current research, identification, taxonomy and other matters of interest. It generally takes the form of slide presentations within the main programme, with informal discussion groups being set up as necessary. It is a demanding weekend, with field trips in the mornings and gull talk until late into the night.

The price for the 5th IGM will be approximately £86, based on the full meeting. This will include full board and accommodation, as well as field excursions to Matosinhos, the most important fishing port in Portugal. Both in the port and on the nearby beach, the gulls are extremely confiding. At this time of year, the area surrounding the Douro supports some 15,000 large gulls, including a considerable number of colour-ringed *graellsii*, *intermedius* and *michahellis*. Because this is Porto, there will also be a port-wine tasting for everyone. If there is sufficient interest, a pelagic trip will be organised after the IGM, for an additional cost.

The organisers are expecting attendees from most countries in Europe. If you are interested in attending, or would like to offer a contribution, please contact Peter Rock (pete.rock@virgin.net), 59 Concorde Drive, Bristol BS10 6PX.

Bird Action Grants for 2001

Following the successful launch and first award of Bird Action Grants in 1999, the British Ornithologists' Union (BOU) is able to offer further grants for the year 2001, as announced in the new edition of *The British List*. The closing date for applications is 31st March 2001. Details and an application form are available from the BOU, The Natural History Museum, Tring, Hertfordshire HP23 6AP, UK; tel: 01442-890080; fax: 02079-426150; e-mail: bag@bou.org.uk; see also the BOU's website (www.bou.org.uk).

Bird Action Grants are awarded to assist UK projects involved in researching and protecting the UK's most vulnerable bird species as listed in the UK Biodiversity Action Plan. These are: Common Scoter *Melanitta nigra*, Red-necked Phalarope *Phalaropus lobatus*, Roseate Tern *Sterna dougallii*, Turtle Dove *Streptopelia turtur*, European Nightjar *Caprimulgus europaeus*, Wryneck *Jynx torquilla*, Wood Lark *Lullula arborea*, Marsh Warbler *Acrocephalus palustris*, Spotted Flycatcher *Muscicapa striata*, Red-backed Shrike *Lanius collurio*, Tree Sparrow *Passer montanus*, Linnet *Carduelis cannabina*, Common Bullfinch *Pyrrhula pyrrhula*, Cirl Bunting *Emberiza cirlus*, Reed Bunting *E. schoeniclus* and Corn Bunting *Miliaria calandra*. The BOU's Bird Action Grant Scheme is funded by money raised from the BOU's 'Christmas Birdwatch' competition.

World Birding Conference – birders contributing to global bird conservation

A conference hosted jointly by the African Bird Club, British Ornithologists' Union, British Trust for Ornithology, Neotropical Bird Club and Ornithological Society of the Middle East will be held between 30th March and 1st April 2001 at The Hayes Conference Centre, Swanwick, Derbyshire, UK. Those who attended the first World Birding Conference, in 1997, will be keen to book for a repeat programme of talks looking at the contribution that birders have made, and continue to make, to global bird conservation. A range of internationally renowned speakers will illustrate this important aspect of birdwatching and highlight new opportunities for today's globetrotting birder. Full details are available from WBC2, c/o BTO, The Nunnery, Thetford, Norfolk IP24 2PU; tel: 01842-750050.

Egg-collector's photographs excluded from BB

In April 1999, Merseyside Police found a collection of specimens and over 1,000 clutches of eggs at the home of wildlife-photographer Dennis Green. The birding press has recently carried news of the conviction on 13 charges and the subsequent 12-month conditional discharge. Following his conviction, and in common with all major bird journals and magazines, the editorial board has decided that Mr Green's material will no longer be used in *BB*.

Changes in the publishing world...

Seabirds was published by Croom Helm in 1982, soon to be followed by *Shorebirds* and *Wildfowl*, each of them a best-seller in the ornithological world. Since then, under both the Pica Press and the Christopher Helm imprints, many more superb family monographs have been published. In 1998, for instance, *Parrots* won the Library Association's McColvin medal for an outstanding work of reference, beating the *New Oxford Dictionary of English*. It is not only family guides that have been published under these two imprints; outstanding field guides to regions such as Europe, Kenya, India and The Gambia have established the standards in this area of ornithological publishing, too. In autumn 1999, another addition to the field-guide literature, David Sibley's *North American Bird Guide*, and the family monograph *Thrushes* have appeared.

In the publishing world, however, time does not stand still, and on 1st October 2000 the ownership of Pica Press passed to A & C Black, publisher of the Christopher Helm imprint. The combined ornithological list, now of over 110 titles in print, is the largest in the world. As Robert Kirk has left Blacks to take up a job with Princeton University Press, in the USA, Nigel Redman is now the commissioning editor at Christopher Helm/Pica Press. He will in future be based at the offices of A & C Black (35 Bedford Row, London WC1R 4JH; tel: 020 7404 5630 (direct line); fax: 020 7404 7706; e-mail: ornithology@atlas.co.uk).

...and changes in the Yearbook editorship

If you have received your copy of *The Birdwatcher's Yearbook and Diary 2001*, you will know that this is the last edition that will bear the editor's name John Pemberton. John started the whole thing with the first edition, for 1981, and thereby fulfilled a need with what has become an indispensable tool for the modern birder. We cannot count how many times our well-thumbed copy is consulted at the 'News & comment' desk. With John's retirement, we now say welcome and best wishes to David Cromack (of *Bird Watching* fame) and his wife, who take up the reins of this essential piece of ornithological equipment. They have a very hard act to follow.

Spotted Crake's nest located by transmitter

Possibly the first nest of a Spotted Crake *Porzana porzana* to be discovered in Scotland was located at the RSPB's Insh Marshes Reserve during a research project in 2000. By fitting minute radio transmitters to two adult crakes, and after following them for five weeks, Ian Mackenzie, of the University of East Anglia, eventually managed to track one of the birds back to its nest. There he found a record-breaking clutch of 17 eggs, of which 14 hatched successfully.

Crested Honey-buzzards

The Crested Honey-buzzard *Pernis ptilorhyncus* has been appearing with increasing regularity over Israel. In the past two years, there have been almost 20 records during spring migration and two or three in autumn, but, as yet, just one record to the south of that country (in Egypt). Information is currently being sought from anyone who may have knowledge as to where these birds overwinter. Any information, or details of any sightings, should be sent to Itai Shani, 1 Maraten St, Rehovot 76292, Israel (e-mail: shanii@bgumailbgu.ac.il).

Egg-collectors target Tree Sparrows again

Historically, the nesting Tree Sparrows *Passer montanus* at Rutland Water have fallen victim to egg-collectors who targeted the nestboxes. A report in the Newsletter of the Northumberland & Tyneside Bird Club cites the loss of 18 clutches of Tree Sparrows from nestboxes at Big Waters Nature Reserve, near Tyneside, also blamed on the activities of egg-collectors. Boxes were apparently visited repeatedly during the breeding season, and were frequently damaged; it is calculated that at least 74 eggs were lost. Despite this, it was a record year for the colony: 42 boxes used, 77 clutches totalling 375 eggs laid, 216 eggs hatched and 190 young fledged. It is a sad reflection on the general status of the Tree Sparrow, however, that egg thieves are now targeting this species.

BOC and BOU

At a Special General Meeting of the British Ornithologists Club (BOC), held at South Kensington on 31st October 2000, the BOC voted on and accepted a new set of rules which, in some ways, reduced links with the British Ornithologists' Union (BOU) yet, in others, strengthened them. Since the formation of the BOC in October 1892, it has been necessary to be a member of the BOU to be eligible for membership. Under the new rules this is no longer necessary, although BOU members will be eligible for a discounted annual subscription of £12. As part of the new era of co-operation between the two organisations, there has been a series of discussions on possible means of forging closer links between them. We can look forward to some joint publications in future years. Details of the BOC can be obtained from the Hon. Secretary, Dene Cottage, West Harting, Petersfield, Hampshire GU31 5PA; e-mail: mbcasement@aol.com

BTO Gardens in Swanwick

Over 300 birdwatchers gathered between 8th and 10th December at the traditional Swanwick venue, in Derbyshire, for the 2000 BTO Birdwatchers' Weekend, once again kindly sponsored by Swarovski. This year, the theme was 'Garden Birds in the 21st Century'. Many of those who attended are participants in the very successful BTO Garden Birdwatch Survey. No-one can have gone away from the weekend unconvinced both of the importance of gardens as habitats, not only for birds but also for many other forms of wildlife, and of the pleasure derived by householders from watching and feeding the birds that visit them. David Harper gave the annual Witherby lecture, entitled, appropriately enough, 'The public and private lives of Robins *Erithacus rubecula*': even after years of study, these most familiar of birds hold mysteries that we cannot yet resolve. At the other end of the scale, Bill Clark, as Swarovski guest lecturer, delighted the audience with his photographs of African eagles and spoke on the importance of (accurate) field identification. The Tucker Medal was presented to Dr Rhys Green in recognition of his outstanding contribution to the scientific work of the Trust.

The customary *BB* Mystery Photographs competition attracted no fewer than 20 correct entries, from which the name of Tim Mackrill was drawn as winner. (Contributed by Peter Wilkinson)

Spanish bird news

Spain currently has no birdline or pager systems, but you may care to consult www.terra.es/personal3/gutarb to get the latest news – in English!

Changes to the British List

The following three additions to Category A of the British List, announced by the BOU Records Committee, will take effect when published in *Ibis* (expected to be in January 2002).

Short-billed Dowitcher *Limnodromus griseus*
One at Rosehearty, near Fraserburgh, Aberdeenshire, on 11th-24th September 1999, and some 350 km to the south, in the Seal Sands area of Teesside, during 29th September to 30th October 1999 (*Birding World* 12: 364-370, 385). The records were considered to relate to the same individual, a juvenile with two missing tertials on the right wing. After consulting Dennis Paulson in the USA, and researching relevant literature, the Committee concluded that, on current knowledge, it was not possible to assign this individual to any one of the species' three races. This is the first British record; there are four previous West Palearctic records, including a juvenile at Tacumshin, Co. Wexford, Ireland, from 30th September to 2nd October 1985 (*Brit. Birds* 79: 548).

Black Tern *Chlidonias niger surinamensis*
One at Weston-super-Mare, Avon, during 3rd-11th October 1999 (*Birding World* 12: 416-418) has been accepted as the first British record of the American race *C. n. surinamensis*. The file is being passed to the Committee's Taxonomic Sub-committee for consideration of this form's taxonomic status, which will necessitate consultation with the American Ornithologists' Union.

Rufous Nightingale *Luscinia megarhynchos hafizi*
One found dead on Fair Isle, Shetland, on 30th October 1971 (specimen now in the National Museums of Scotland in Edinburgh), originally accepted as showing the characters of the central Asian race *L. m. hafizi*, was later considered to belong to the *africana-hafizi* group but with characters closest to *hafizi* (*Brit. Birds* 65: 341; 73: 519). Two more recent claims of *hafizi* submitted to the British Birds Rarities Committee necessitated a re-examination of the Fair Isle specimen. Further information has become available on the separation of birds in the *africana-hafizi* group, enabling the Committee to confirm that the Fair Isle individual does, indeed, belong to the race *hafizi*. It thus becomes the first British record of this eastern race.

White-tailed Eagles reach century

The year 2000 marked the successful fledging of the 100th White-tailed Eagle *Haliaeetus albicilla* to be hatched in Scotland since the reintroduction of the species from Norway, 25 years ago. Sadly, it also saw the demise of 'Blondie', one of the 'founding mothers' of the scheme. Given her nickname by the RSPB because of her light sandy head, she raised 15 chicks in as many years, including the first to fly from a Scottish nest for over 70 years. 'Blondie' must have been at least 21 years old. She disappeared in May, and her body was later discovered; she had died from natural causes.

Social history of birdwatching

Stephen Moss is collecting material for a forthcoming book on the social history of birdwatching. He would welcome any appropriate contributions or anecdotes, especially those concerned with the era before 1970; he is particularly interested in how social changes (e.g. better transport, communications, technology, etc.) affected the progress of the hobby. All contributions used will be acknowledged. Ideally, Stephen would prefer contributions by e-mail (stephenmoss@compuserve.com), or you can write to him at: BBC Natural History Unit, Broadcasting House, Whiteladies Road, Bristol BS8 2LR.

What reference?

In 1995 Kristian Adolfsson and Stefan Cherrug published *Bird Identification: a reference guide*, which included references to any photographs, illustrations, articles, etc. that could be used to identify birds. Altogether, the book contained over 11,800 references and cross-references concerning more than 870 species compiled from 66 ornithological journals published in 21 countries. Ornithological journals from the period 1975-94 were included. This mammoth and extremely useful publication had one drawback: there were no references to books and other sources. The possibility of plugging this gap now seems to be on the horizon. Chris Galey is producing a series of 'Species Indexes' with over 140,000 records from a very extensive library. At our request, he produced some sample sheets for Red-footed Falcon *Falco vespertinus*: six with photographs, 34 with illustrations, 45 'others', three sound-recordings and one video-recording; for Northern Wheatear *Oenanthe oenanthe*: 20 references with photographs, 60 with illustrations, 68 'others' and six sound-recordings; and for Paddyfield Warbler *Acrocephalus agricola*: two with photographs, 23 with illustrations, 25 'others', two sound-recordings and one video-recording. How much use and how complete this compilation will prove to be only time will tell, as the project is still being developed. For further details, contact Chris Galey, 29 Ainsdale Drive, Werrington, Peterborough, Cambridgeshire PE4 6RL.

Radio-tracking White Storks

Last summer, three young White Storks *Ciconia ciconia* from nests in the Rochefort area, France, were fitted with Argos satellite transmitters, to enable their movements to be tracked once they left the nest. By late August, all three were still in southwest France, making a leisurely start to their journey south. Their movements are being reported on a website (www.cigognes.org), a new development increasingly being used in the study of bird migration. In 2000, there were 87 breeding pairs of White Storks in Charente-Maritime (home département for Ligue pour la Protection des Oiseaux), making it one of the most significant breeding areas for this species in France.

Gurney's Pitta

According to a recent survey, the known World population of Gurney's Pitta *Pitta gurneyi* has fallen from about 35 pairs on their rediscovery in 1986 to just 12 pairs in the 2000 breeding season. The current survey was carried out by Thai fieldworker Yothin Meekaeo, supervised by Phil Round, organised by the Oriental Bird Club (OBC) and sponsored by Sweden's Club 300. Following the ending of the DANCED (Danish government-funded) project at Khao Nor Chuchi (KNC) reserve, the only site where this species is known to breed, and which has suffered heavily from habitat encroachment, the OBC has stepped into the breach to co-ordinate efforts to try to protect the site and the few remaining Gurney's Pittas. OBC actions have included discreet lobbying at the highest level in Thailand. This has been followed by the establishment of a task force, headed by a Thai Privy Councillor, to investigate the situation at KNC. After a visit to the reserve by the task force, official signs were erected on newly cleared areas stating that they were illegal. In November 1999, the OBC funded a seminar in Bangkok on the situation at KNC for Thai NGOs. This created considerable interest in the Thai Press, radio and TV.

At last year's British Birdwatching Fair, under the legend 'Extinction is not an Option!', the OBC launched its range of Gurney's Pitta tee-shirts (made in Thailand) and pin badges to raise funds for the campaign. There were also three giant (1.5 m tall) Gurney's Pitta petitions, which were signed by over 3,000 visiting birders, including Bill Oddie, RSPB supremo Graham Wynne, Barbara Young, Tony Soper, Tim Appleton and Martin Davis. In October, these petitions were presented to staff at the Royal Thai Embassy in London. Other actions have included a Press conference in Bangkok in August 2000 for the Thai-media environment correspondents. In the 2001 breeding season, a birdwatchers' liaison warden will be stationed at KNC to act as a focal point for visiting birders, with the aim of helping them to see the bird with the least disturbance possible. The warden will also collate records and ensure that birdwatchers cannot be blamed (instead of the loss of habitat) for the decline of Gurney's Pitta. Experienced birders who feel that they could fulfil such a role should contact the OBC (mail@orientalbirdclub.org) or visit the website: www.orientalbirdclub.org

Reviews

THE BIRDS OF NORFOLK

By Moss Taylor, Michael Seago, Peter Allard & Don Dorling.
Pica Press, Mountfield, Sussex, 1999.
552 pages;
32 colour plates, maps.
ISBN 1-873403-86-0.
Hardback, £35.00.

This comprehensive volume brings up to date the history of the Norfolk avifauna. The first five chapters, prior to the Systematic List, are all compulsive reading, covering Geography, History and personalities, Migration, Ringing, and Conservation. Dr Moss Taylor's chapter on 'A history of bird ringing in Norfolk' is particularly captivating reading. What must it have been like to have been at Cley on 3rd October 1961 when Barry Spence trapped Norfolk's first (Britain's second) Radde's Warbler *Phylloscopns schwarzi*? Even Richard Richardson was unsure of its identity, confirmed the following day only after Ken Williamson had travelled overnight from Scotland to see it. In the same chapter, Peter Clarke's work at Holme Bird Observatory is well documented, although, strangely, he is not featured in the earlier 'Personalities' chapter.



The Systematic List, 429 pages written by 39 authors, is brought to life by many delightful vignettes. The book is also illustrated by 32 colour plates, pride of place going to a fine Richard Richardson painting of Spotted Redshanks *Tringa erythropns*. The extensive bibliography contains over 600 references for further browsing.

This excellent book is a worthy addition to every birder's bookshelf. All royalties from its sale will be donated to the wildlife conservation programme within Norfolk (see also *Brit.Birds* 93: 642).

Andy Lowe

BIRDS OF THE CZECH REPUBLIC

By Josef Kren.
Christopher Helm, A & C Black, London, 2000.
336 pp; 393 distribution maps; numerous line-drawings.
ISBN 0-7136-4784-1.
Hardback, £25.00.

The whole of this book is a compilation, with nothing original. The author has lived abroad for about ten years and is, therefore, not familiar with contemporary ornithological, political and administrative events in the Czech Republic. Data extracted from several works of reference (e.g. the two *Atlases of Breeding Distribntion of Birds in the Czech Repnblic*, the *Atlas of Wintering Birds in the Czech Repnblic*, the *Fanna of the Czech Repnblic - Birds, the Wetlands of the Czech Repnblic*, the *Important Bird Areas in Enrope - Czechoslovakia*) have been used to compile this book. The period covered is not defined, though it is presumably about 1800-2000 (see the chapter Introduction and Species Accounts). It is, however, almost worthless to summarise the data from 200 years (too long a period) by counties (too large an area, the 76 counties averaging more than 1,000 km² each). According to the maps, it appears that some species breed throughout the whole Republic, whereas they may actually be very rare and localised (e.g. Garganey *Anas qnerqnednla*, today with only 50-70 pairs; Northern Shoveler *A. clypeata*, with only 40-60 pairs), and misleadingly high figures are often given in this book. On the other hand, there are many recent developments that are omitted (e.g. Peregrine Falcon *Falco peregrinns*, which has doubled in breeding numbers since 1990; Goosander *Mergns merganser*, with four confirmed breeding records, but none shown on the relevant map; Great Skua *Catharacta skna*, with only 'two recent' records mentioned, but for which there are now 12 records). The author's statement that 'These maps are as up-to-date as possible' is just not true. Similarly, today's protection status is usually quite different from that presented in the book. The inclusion of 43 black-and-white photographs of rather poor quality is pointless. The most important fault, however, is that the bird distribution is displayed within 76 counties that will, in the very near future (probably within one or two years), cease to be recognised.

It is true that this book is the first in English on the birds of the Czech Republic (see Foreword written by Prof. Johnsgard). Unfortunately, its quality is not high.

Karel Šťastný

ALBATROSSES

By W. L. N. Tickell.
Pica Press, Mountfield, Sussex, 2000.
448 pages; maps; tables; diagrams; 52 colour plates.
ISBN 1-873402-94-1.
£40.00.



Lance Tickell first started studying albatrosses in 1958. Since then, he seems to have visited most species at their breeding sites. The insights and knowledge that he has gained over 40 years have now been distilled in this monograph, the first comparative account for the family. The book is a good read, unlike some monographs, and chapters on albatrosses in history and in poetry add to its readability. The photographs are stunning (although some seem to have suffered colour-wise in production). The detailed accounts of the history of individual breeding localities make for fascinating reading. For example, it is sobering to read that the Short-tailed Albatross (or Steller's, as Lance Tickell prefers to call it) *Diomedea albatrus* just managed to escape extinction by feather-hunters, but heartening to know that its still small population is now steadily increasing.

Albatrosses now face serious threats, mainly from longline fishing, and concerted conservation actions by BirdLife International and others are under way. Let us hope that this publication will help to raise awareness of the plight of these splendid birds. Lance Tickell, at least, has done them proud.

John Cooper

AUTUMN BIRD MIGRATION AT BEIDAIHE, CHINA, 1986-1990

Edited by Martin D. Williams.
Illustrated by Jeremy Pearse, David N. Bakewell & David Nurney.
Beidaihe International Birdwatching Soc., Hong Kong, 2000. 144 pages; photographs, histograms.
Paperback, £6.50.

This excellent publication summarises the autumn migration records for this five-year period, which followed the very successful spring survey in 1985 by Williams *et al.*, who rediscovered Beidaihe as one of the World's finest migration watchpoints. The Editor apologises for the decade-long delay in publication. This report provides valuable information on the history of watching there; has sections on habitats, the effect of weather, and hazards to migrants; and has a comprehensive systematic list, which includes historical records. It is, thus, a valuable baseline document for anybody who has visited or who intends to visit Beidaihe in the autumn. Summaries for subsequent years, including spring, would be immensely valuable, but sadly now seem unlikely.

Tony Marr

A GUIDE TO THE BIRDS OF THE PHILIPPINES

By Robert S. Kennedy, Pedro C. Gonzalez, Edward C. Dickinson, Hector C. Miranda, Jr, & Timothy H. Fisher.
Oxford University Press, Oxford, 2000. xx + 369 pages; 72 colour plates; 500 maps.
ISBN 0-19-854669-6; Hardback, £60.00.
ISBN 0-19-854668-8; Paperback, £34.50.

For many years, visitors to the Philippines have had to labour with John duPont's *Philippine Birds* (1971). The size and weight of that book, primarily a museum guide, made it an awkward piece of luggage, and for some species the text and plates could be completely misleading. Somewhat smaller, this new book is a genuine working field guide.

A succinct introduction precedes 72 plates by largely little-known artists. In the main, these are pleasing and functional, although some could be improved upon; the posturing of the pittas (Pittidae) is bizarre, while the Citrine Canary Flycatcher *Culicicapa helianthea* looks decidedly ill (or badly stuffed). There is a range map for most species, although not for some endemics, and the value of including maps for vagrants is questionable. The species texts are necessarily short and concise. The vocalisations seem well transcribed, although I see little point in giving the name of the person(s) who supplied the tape recordings for each species. In an age of rampant splitting, the taxonomy is refreshingly conservative. By and large, the English names have been chosen sensibly, even though some are not those in common usage.

Minor niggles aside, this book will be a tremendous boon to anyone birdwatching in the Philippines, and the authors are to be commended.

Phil Heath

HARRIERS OF THE WORLD: THEIR BEHAVIOUR AND ECOLOGY

By Robert E. Simmons. Oxford University Press, Oxford, 2000. 368 pages; numerous line-drawings, figures and tables. ISBN 0-19-854964. Paperback, £27.50.

Harriers, particularly the Marsh Harrier *Circus aeruginosus*, are not only among my favourite birds but were also a large part of my early life, and the same applies to the author of this work. It seems that both of us spent a great part of our time as volunteers ensuring the success of the recolonising birds of the 1970s.

This book was, therefore, easy reading for me, albeit extremely technical and scientific, but nevertheless full of everything you need to know about this graceful family of birds. There is insufficient space here to cover the enormous breadth of subjects encompassed in this book, but I particularly enjoyed the sections on evolution and on prey and hunting strategies. The text is interspersed with excellent line-drawings by the author's twin brother John (what a talented family!), and I would suggest that all harrier fanatics need to get a copy of this book.

With so much persecution of and controversy about the harrier species which occur in the UK, let us hope that this fine volume of research will lead to a better future for these wonderful birds.

Derek Moore

RAPTORS AT RISK: PROCEEDINGS OF THE V WORLD CONFERENCE ON BIRDS OF PREY AND OWLS

Edited by R. D. Chancellor & B.-U. Meyburg. Hancock House Publishers, Surrey, Canada, 2000. 895 pages. ISBN 0-88839-478-0. Paperback, £30.00.

With 895 pages and 80 scientific papers, this volume will contain something for everyone with even a passing interest in raptors. The 5th World Conference on Birds of Prey and Owls was held in South Africa and there is an understandable bias towards African species, but there are contributions from all around the World and several papers of direct relevance to raptor conservation in Britain. Ian Newton's review of the effects of predators on their prey, and a paper by Thirgood & Redpath on raptor predation on Red Grouse *Lagopus lagopus* in Scotland were of particular interest. Slightly farther afield, a thought-provoking paper by Dan Alon asks the question 'Where have 30,000 Lesser Spotted Eagles [*Aquila pomarina*] gone?' and speculates that the Chernobyl disaster in 1986 may have been responsible for the sudden and dramatic decline in numbers noted at about that time. Throughout the book, some of the key problems faced by raptors around the World are highlighted, including illegal poisoning, mortality on electricity powerlines and the deliberate killing of them on migration. This makes for sobering reading, particularly for British-based readers used to the improving status of raptor populations in recent decades. Inevitably, there is some variation in quality among contributions, but the volume has been edited and produced to a very high standard.

Ian Carter

CHECKLIST OF THE BIRDS OF NORTHERN SOUTH AMERICA: an annotated checklist of the species and subspecies of Ecuador, Colombia, Venezuela, Aruba, Curaçao, Bonaire, Trinidad & Tobago, Guyana, Suriname and French Guiana

By Clemencia Rodner, Miguel Lentino & Robin Restall. Pica Press, Mountfield, Sussex, 2000. 136 pages. ISBN 1-873403-92-5. Softback, £14.95.



This is a useful checklist of all the 2,245 species that occur in northern South America. All the subspecies are listed, together with brief information about their distributions. It is up to date with proposed taxonomic changes, although there is still much to be learnt, as the authors acknowledge.

This is an important additional reference to the ornithological knowledge of this important and interesting region. The checklist is designed for use in conjunction with a forthcoming field guide by the same authors. I am looking forward to the publication of this larger work.

Dave Odell

ALSO RECEIVED

Finches & Sparrows

By Peter Clement, Alan Harris & John Davis. (Christopher Helm, London. 500 pages. ISBN 0-7136-5203-9. £19.99) (First edition reviewed: *Brit. Birds* 87: 572.)

Announcements

Bird Illustrator of the Year

To recognise an artist for the best set of bird illustrations. Amateur and professional artists are invited to submit four line-drawings (of precise specified dimensions) suitable for publication. The subjects should be birds recorded in the Western Palearctic (Europe, North Africa and the Middle East). The winner will receive £100 and an inscribed salver, the two runners-up receive £40 and £25, and all three receive books from the sponsors, Christopher Helm and T. & A. D. Poyser. Established in 1979.

Two additional awards are presented: The Richard Richardson Award, for the best work submitted by an artist under 22 years of age, established in 1979 in honour of Richard Richardson, the East Anglian ornithologist and artist; and The PJC Award, for a single work of merit, established in 1987 by David Cook in memory of his wife, Pauline.

All the winning entries are displayed at the Society of Wildlife Artists annual exhibition and at the British Birdwatching Fair.

Closing date for entries: 15th March. For full details of the rules, write to British Birds Editorial Office, The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY. Please enclose a stamped, self-addressed envelope.

Past winners:

BIY Crispin Fisher (1979), Norman Arlott (1980 & 1981), Alan Harris (1982), Martin Woodcock (1983), Bruce Pearson (1984), Ian Lewington (1985), Chris Rose (1986), David Quinn (1987), Martin Hallam (1988), John Cox (1989), Gordon Trunkfield (1990), John Davis (1991), John Gale (1992), Richard Allen (1993), Ren Hathway (1994), Andrew Stock (1995), Dan Powell (1996), John M. Walters (1997), Paul Henery (1998), Brin Edwards (1999) and Daniel Cole (2000).

RRA Alan F. Johnston (1979), Andrew Stock (1980), Darren Rees (1981), Keith Colcombe (1982 & 1984), Gary Wright (1983), Ian Lewington (1985), Timothy Hinley (1986), Andrew Birch (1987 & 1991), John Cox (1988), Stephen Message (1989), Antony Disley (1990 & 1992), Peter Leonard (1991 & 1993), Max Andrews (1994 & 1995) and Simon Patient (1996, 1997, 1998, 1999 & 2000).

PJC Award J. S. Lyes (1987), John Hollyer (1988), Darren Rees (1989), Andrew Stock (1990), Dafila Scott (1991), Richard Fowling (1992), John M. Walters (1993), James McCallum (1994), George Woodford (1995), Dan Cole (1996), Paul Henery (1997), George Brown (1998), Rosemary Powell (1999) and Szabolcs Kókay (2000).

Best Annual Bird Report

The competition for the Best Annual Bird Report published during 2000 is currently being judged, and an announcement regarding the winners will be made as soon as possible. For the time being, and with regret, this competition is being discontinued.

Young Ornithologists of the Year

For the time being, and with regret, this competition is being discontinued (see page 41).

Free subscriptions for County/ Regional Recorders

British Birds and Carl Zeiss Ltd, sponsors of the British Birds Rarities Committee, are jointly continuing to offer free annual subscriptions to *British Birds* to all the County/Regional Recorders, as our way of saying 'Thank you' to them for the hard work which they contribute to British ornithology in their 'free time'.

Photographs and drawings may be for sale

Many of the photographers and artists whose pictures appear in *British Birds* welcome the opportunity to sell their work. Anyone who wishes to obtain either photographic prints or original drawings is welcome to write (making an enquiry about availability, making an appropriate offer, or seeking the price) to the photographer or artist concerned, c/o British Birds, The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY.

Photographs for 'European news'

We plan to continue to include more photographs of the actual birds mentioned in our comprehensive, six-monthly compilation of verified records from the whole of Europe, and welcome the submission of photographs of the birds concerned for consideration for publication. As with other photographs in *British Birds*, the usual payment rates will be applied.

Photographs (either colour prints or original transparencies) should be sent to British Birds Editorial Office, The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY.

Bird Photograph of the Year

To recognise the best and/or the most scientifically interesting bird photograph. Up to three colour transparencies, each taken during the previous year, may be submitted by each photographer. Preference is given to photographs taken in the Western Palearctic, but those of species on the West Palearctic List taken anywhere in the World are also eligible. The winner will receive a complete 12-volume set of *Handbook of the Birds of the World*, published by Lynx Edicions, and an inscribed salver; the two runners-up will receive £40 and £25; all three winners will also receive books presented by HarperCollins Publishers. An additional award of an engraved goblet and £100 is presented by The Eric Hosking Trust for the highest-placed photograph submitted by an entrant aged 25 or under. Sponsor: *HBW*. Established in 1976. Closing date for entries: 28th February. For full details of the rules, write to British Birds Editorial Office, The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY. Please enclose a stamped, self-addressed envelope.

Past winners:
Michael C. Wilkes (1977), Peter Lowes (1978), Dr Edmund Fellowes (1979), Don Smith (1980), Richard T. Mills (1981), Dennis Coutts (1982), David M. Cottridge (1983), John Lawton Roberts (1984), C. R. Knights (1985), Alan Moffett (1986), Dr Kevin Carlson (1987), Bob Glover (1988 & 1992), Hanne Eriksen (1989 & 1990), Philip Perry (1991), Alan Williams (1993 & 1994), Mike Lane (1995), Roger Tidman (1996), Jens Eriksen (1997 & 1998), Tony Hamblin (1999), and Alan Petty (2000).

Best Bird Books of the Year

All books voted 'Best Bird Book of the Year' which are still in print are available **post free** to *BB* subscribers through BB Bookshop every month. Those currently in print are as follows:

1980 *Population Ecology of Raptors* by Ian Newton (Poyser) £24.50
1983 *Seabirds: an identification guide* by Peter Harrison (Helm) (3rd edn) £27.99
1984 *Field Guide to the Birds of North America* by the National Geographic Society (National Geographic) (3rd edn) £12.99
1985 *A Dictionary of Birds* edited by Bruce Campbell & Elizabeth Lack (Poyser) £49.95
1986 *Shorebirds: an identification guide to the waders of the World* by Peter Hayman, John Marchant & Tony Prater (Helm) £29.99
1988 *Wildfowl: an identification guide to the ducks, geese and swans of the World* by Steve Madge & Hilary Burn (Helm) £29.99
1990 *A Handbook to the Swallows and Martins of the World* by Angela Turner (Helm) £27.99
1991 *Distribution and Taxonomy of Birds of the World* by Charles G. Sibley & Burt L. Monroe, Jr (Yale) £80.00
1992 *Kingfishers, Bee-eaters and Rollers: a handbook* by C. Hilary Fry, K. Fry & A. Harris (Helm) Pbk £18.99; Hbk £29.99
1993 *Handbook of the Birds of the World* (vol. 1) edited by Josep del Hoyo, Andrew Elliott & Jordi Sargatal (Lynx Edicions) £110.00
1994 *The New Atlas of Breeding Birds in Britain and Ireland* by David Wingfield Gibbons, James B. Reid & Robert A. Chapman (Poyser) £40.00
1995 *Woodpeckers: a guide to the woodpeckers, piculets and wrynecks of the World* by Hans Winkler, David A. Christie & David Nurney (Pica Press) £30.00
1996 *The Birds of Israel* by Hadoram Shirihai (Academic Press) £75.00
1997 *The Historical Atlas of Breeding Birds in Britain and Ireland 1875-1900* compiled by Simon Holloway (Poyser) £25.00
1998 *A Field Guide to Birds of The Gambia and Senegal* by Clive Barlow, Tim Wacher & Tony Disley (Pica Press) £28.00
1999 *Collins Bird Guide* by Lars Svensson, Peter J. Grant, Killian Mullarney & Dan Zetterström (HarperCollins) £24.99
2000 *Cuckoos, cowbirds and other cheats* by N. B. Davis (Poyser) £24.95.

By ordering all your bird books through 'BB Bookshop' (see advertising pages v & vi this month) you will help to subsidise *BB*, to your own benefit and that of all subscribers. Thank you.

Monthly Marathon

Bearing in mind some of the more extraordinary guesses submitted for previous photographs in this Monthly Marathon series, such as a Crimson-winged Finch *Rhodopecbys sanguinea* that, to one contestant, looked like a Mandarin Duck *Aix galericulata*, it is probably not safe to assume that everyone will have recognised the bird in November's picture (plate 345 in volume 93, repeated here as plate 23) as a first-year gull (Laridae). Even so, I shall resist any attempt to second-guess the more creative lateral thinkers taking part in the competition.



Alex Barter

23. Little Gull *Larus minutus*, Norfolk, 1995.

There are only three species of gull occurring in the West Palearctic which, as first-years, show the sort of striking upperwing pattern exhibited by our mystery bird: these are Little Gull *Larus minutus*, Ross's Gull *Rhodostethia rosea* and Kittiwake *Rissa tridactyla*. Of the rest, Bonaparte's Gull *L. philadelphia* is perhaps the most similar, but it does not show such a broad black carpal bar, has more white on the outer primaries, and has an almost continuous dark border to the rear margin of the wing.

Returning to the three prime candidates, it ought not to be too difficult to decide which one we have here, but the soft-focus quality of the photo and, yet again, the fact that the head cannot be seen add to the difficulty. It seems logical to begin by trying to eliminate Little Gull or Kittiwake, the two species which most of us see more often than we do Ross's Gull. While those two have superficially very similar upperwing patterns, there are differences, some of which are visible even in a not-so-perfect photo such as this. The whiteness of the rump and uppertail, contrasting with the grey 'saddle', indicates that some reliance can be placed on the apparent tones of grey in the upperwing. The very pale background has, however, effectively 'consumed' a narrow light trailing edge to the wing (a hint of it can be detected at the tips of the middle primaries) and exaggerates the narrowness of the bird's left wing. Kittiwake has wholly white inner primaries and secondaries, whereas on Little Gull the upper surfaces are predominantly light grey with a thin but distinct secondary bar, just as on the mystery bird. We can be reasonably confident, therefore, that our bird is not a Kittiwake.



24. 'Monthly Marathon'. Photo no. 174. Twenty-second stage in eleventh 'Marathon'. Identify the species. Read the rules (see below), then send in your answer *on a postcard* to Monthly Marathon, c/o The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY, *to arrive by 15th March 2001.*

So, what about the possibility of its being a Ross's Gull? Well, for a start, it shows no suggestion of Ross's Gull's less wide, more triangular-shaped tail band – created by the combination of projecting, dark-tipped central tail feathers and an absence of black on the outer three pairs of tail feathers – which should be obvious from this angle. In some ways, the upperwing pattern of Ross's is more similar to that of a Kittiwake than to that of a Little Gull: for example, it, too, has pure white inner primaries and secondaries, and lacks a secondary bar. An additional feature of Ross's upperwing pattern is a distinct wedge of white penetrating the black of the outer hand, subterminally. First-winter Ross's Gulls seem often to have a patch of blackish (retained juvenile?) feathers on the lower back, a feature which disappears on most or all Little Gulls in their post-juvenile moult.

This first-winter Little Gull was photographed by Alex Barter in Norfolk in 1995 (no month given).

Despite the fears expressed in the opening paragraph, the answers to this month's mystery photograph were, in fact, limited to the three species mentioned. The majority of contestants (89%) identified the gull correctly, while 7% opted for Kittiwake and 4% for Ross's Gull. All of the leaders got this one right, which means that Christer Kalenius, now with an unbroken sequence of eight correct answers, remains one step ahead of Palle Jensen, Peter Lansdown, Andy Mears, Jakob Sunesen, Peter Sunesen and Stephen Votier (all of whom have a sequence of seven-in-a-row), closely followed by Roy Hargreaves, Jon Holt and Richard Patient (all with six) and George Brown and A. Rhodes (both on five).

To win a Sunbird holiday in Africa, America or Asia, the successful contestant this time needs to achieve a correct sequence of at least 13-in-a-row, since three other competitors (Nick Barlow, Diederik Kok and Peter Sunesen) were on 12 before all three were unfortunate enough to be caught out at the thirteenth stage by the Temminck's Stint *Calidris temminckii* (93: plates 117 & 180).

Killian Mullarney

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Monthly Marathon Rules

1. Only current individual subscribers to *British Birds* are eligible to take part. Entrants should give their name, address and *BB* reference on their entry. Only one entry per person each month.
2. Entries must be sent by post, each one on a separate postcard, and be received at the British Birds Editorial Office (Monthly Marathon, British Birds Editorial Office, The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY) by the stated closing date. Every care will be taken, but, even if negligence is involved, no responsibility can be accepted for non-delivery, non-receipt or accidental loss of entries.
3. All *BB* subscribers are eligible, except members of the Editorial Board and staff of *British Birds*, Directors and members of staff of SUNBIRD/WINGS Holidays, and Directors and members of staff of our printers. (Members of *BB* Notes Panels, the Raritics Committee, and other voluntary contributors – including bird photographers, even if one of their photographs is used in the competition – are eligible unless proscribed above.)
4. To win, a *British Birds* subscriber must correctly identify the species shown in ten consecutive photographs included in this competition. The 'Monthly Marathon' will continue until the prize has been won
5. In the event of two or more *BB* subscribers achieving the ten-in-a-row simultaneously, the competition will continue each month until one of them (or someone else!) achieves a longer run of correct entries than any other contestant.
6. In the event of any dispute, including controversy over the identity of any of the birds in the photographs, the decision of the Managing Editor of *British Birds* is final and binding on all parties.
7. No correspondence can be entered into concerning this competition.
8. The name and address of the winner will be announced in *British Birds*.

Recent reports

Compiled by Barry Nightingale and Anthony McGeehan

This summary of unchecked reports covers the period 13th November 2000 to 1st January 2001.

American Wigeon *Anas americana* Males at Rogerstown (Co. Dublin) and North Slob (Co. Wexford), both remaining through November into December. **Black Duck** *Anas rubripes* Tresco (Scilly), 2nd to late December; Loch Fleet (Highland), 22nd December. **Lesser Scaup** *Aythya affinis* Female, Stoneyford Reservoir (Co. Antrim), 12th December. **Steller's Eider** *Polysticta stelleri* Hopeman Harbour (Moray), 16th-18th November. **Gyr Falcon** *Falco rusticolus* Presumed juvenile of white phase, various points on coasts of Co. Wicklow and Co. Dublin, 11th November to 11th December. **Sociable Lapwing** *Vanellus gregarius* Aldeburgh (Suffolk), 19th-20th November. **Great Snipe** *Gallinago media* Fazakerley (Merseyside), 16th-21st November and 2nd December; Ballycotton (Co. Cork), 16th-17th November. **Long-billed Dowitcher** *Limnodromus scolopaceus* Belfast Lough RSPB Reserve (Co. Down), until 17th December. **Lesser Yellowlegs** *Tringa flavipes* Laugharne Marsh (Dyfed), at least 12th December (possibly since end November) to 1st January. **Laughing Gull** *Larus atricilla* First-winter, Ballina (Co. Mayo), 9th December. **Franklin's Gull** *Larus pipixcan* Paignton (Devon), 16th-19th December. **Herring Gull** *Larus argentatus* First-winter of American race *smithsonianus*, Killybegs (Co. Donegal), 13th December. **'Kumlien's Gull'** *Larus glaucoides kumlieni* Subadult at Belfast rubbish tip, 15th December; another subadult, Ballina, 16th December. **Forster's Tern** *Sterna forsteri* Bangor (Gwynedd), 2nd-18th December. **Brünnich's Guillemot** *Uria lomvia* Scapa beach (Orkney), found dead, 21st December. **Olive-backed Pipit** *Anthus hodgsoni* St Just (Cornwall), 13th-14th November; Hartlepool Docks (Cleveland), 26th November. **Bohemian Waxwing** *Bombycilla garrulus* Widespread influx during last week of December, mainly into eastern half of Britain, with flocks of up to 50, but some reaching as far west as Cumbria. **Pied Wheatear** *Oenanthe pleschanka* Gibraltar Point (Lincolnshire), 18th-26th November. **Hume's Warbler** *Phylloscopus humei* Portland (Dorset), 4th-8th December. **Dusky Warbler** *Phylloscopus fuscatus* Portland, 16th November; Great Yarmouth cemetery (Norfolk), 21st November; Jersey (Channel Islands), 23rd-24th December. **Penduline Tit** *Remiz pendulinus* Sandwich Bay (Kent), at least one, 7th December. **Isabelline Shrike** *Lanius isabellinus* North Slob, 20th November to 9th December. **Rosy Starling** *Sturnus roseus* Bristol (Avon), 10th December to 1st January; late report, Harrold (Bedfordshire), end October to mid November. **Arctic Redpoll** *Carduelis hornemanni* South Uist (Western Isles), 13th December (possibly since end November).



Iain H. Leach

25. Isabelline Shrike *Lanius isabellinus*, Whitley Bay, Tyne and Wear, November 2000.



Mike Ashforth

26. Grey Phalarope *Phalaropus fulicarius*, Covenham Reservoir, Lincolnshire, December 2000.



Steve Young/Birdwatch

27. Steller's Eider *Polysticta stelleri,* Hopeman, Morayshire, November 2000.



J. Harriman

28. Desert Lesser Whitethroat *Sylvia curruca minula,* Southoak, Teesside, November 2000.



Iain H. Leach

29. Pied Wheatear *Oenanthe pleschanka,* Gibraltar Point, Lincolnshire, November 2000.



Mike Malpass

30. Forster's Tern *Sterna forsteri,* Bangor, Gwynedd, December 2000.



J. Harriman

31. Bohemian Waxwing *Bombycilla garrulus,* Hull, Humberside, December 2000.



Hugh Harrop

32. Pine Grosbeak *Pinicola enucleator,* Shetland, November 2000.

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Rarities Committee news

Election for 2001 member of BBRC

Following the request for nominations for BBRC membership, published in the September issue of *British Birds* (93: 433), we have received one nomination. There will, therefore, be an election for the new member for 2001.

The two candidates are Steve Votier and Brian Small, both top-calibre birders with a sound working knowledge of East Anglia. Both are also enthusiastic supporters of BBRC, provide descriptions of the highest quality when submitting records, and are widely acknowledged to be at the forefront of modern birding.

Brian is in his mid-thirties, and was nominated and seconded by the Suffolk Records Committee. He originates from Hampshire. In 1988 he moved to Suffolk, and within a few weeks he found Baird's Sandpiper and Greenish Warbler; he served on the county's committee from 1990 to 1999. Brian has an excellent track record for finding and identifying rarities, both in his own county and elsewhere. He found the Pallid Swift at Southwold, was involved in the identification of the Landguard Blyth's Pipit, and is currently pushing back the frontiers of 'Caspian Gull' identification at Southwold. He has published numerous items on identification issues in British and foreign journals. Brian is a superb illustrator, with a string of books and articles to his credit. Co-founder of www.surfbirds.com, he has travelled extensively in Europe, the Middle East, East Africa and North America.

Steve is the BBRC's nominee. Despite being only in his mid-twenties, Steve has worked as an Assistant Warden on Fair Isle, at Eilat, and at Long Point in Canada, and spent an autumn watching migrants on Happy Island, China. He lived for years in Norfolk, where he helped to set up the Sheringham Ringing Station, but he now lives in Glasgow and works in Shetland. He has an extensive knowledge of identification of birds both in the field and in the hand, has written numerous identification articles, and has travelled widely in America and in the Middle and Far East. He must be one of the few birders to have found three Blyth's Reed Warblers in Britain, and he has also located and identified such difficult birds as Citrine Wagtail, Paddyfield and Lanceolated Warblers, and Pechora Pipit.

County records committees and bird-observatory wardens vote in the election that will take place in early January, and we shall announce the result in early February.

Colin Bradshaw

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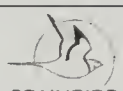
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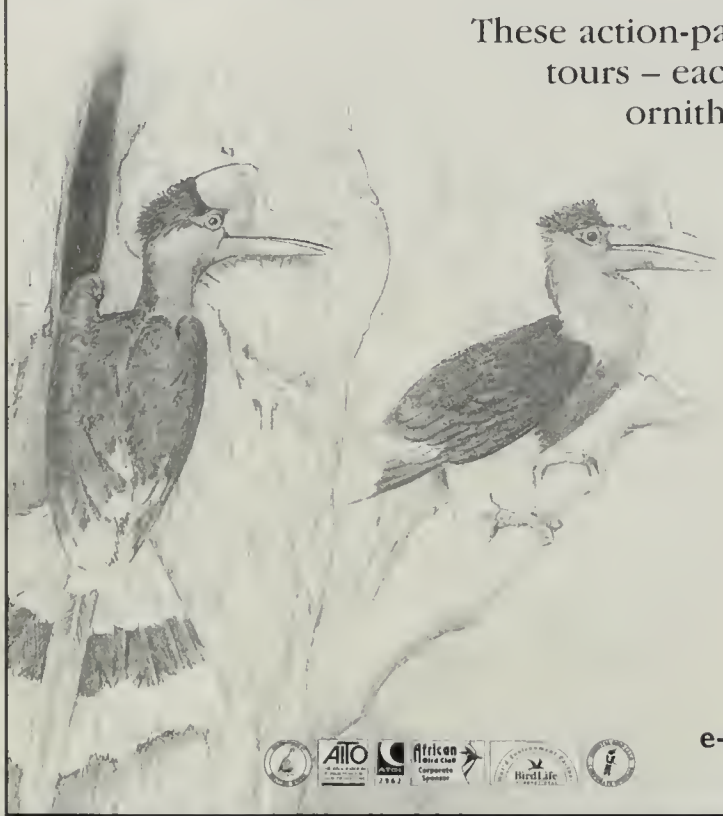
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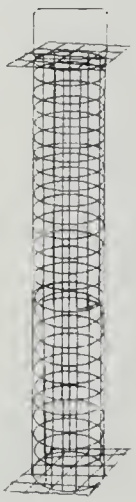
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New Editor for *British Birds*

The Directors of BB 2000 Limited are pleased to announce that *British Birds* has a new Editor: Dr Roger Riddington. Roger will be well known to many of our readers, having been Warden of Fair Isle Bird Observatory, Shetland, from 1994 to 1997.

His credentials as Editor of *BB* are impeccable. Having taken a first degree in Geography at Oxford University, he remained there to work at the Edward Grey Institute of Field Ornithology on the ecology of Great Tits *Parus major*, for which he was awarded his DPhil in 1992. In that year, he left Oxford to spend a summer as Seabird Monitoring Officer on Fair Isle, after which he went to the University of East Anglia to carry out post-doctoral research on Brent Geese *Branta bernicla*. Following a year in Norfolk, he returned to Shetland to become Warden on Fair Isle. Since leaving Fair Isle he has worked in Lerwick, Shetland, as Manager of the Shetland Biological Records Centre.

Roger has a Class A ringing permit, has been a member of the Editorial Board of the British Trust for Ornithology's publication *Ringing & Migration* since 1995, and is co-author of the forthcoming *Birds of Shetland* (to be published by Christopher Helm), and a book on Shetland's rare plants. He has an impressive and diverse list of ornithological papers and articles to his name. In addition to having written about the ecology of both Brent Geese and Great Tits, he has covered such matters as the 1994 influx of 'Northern' Bullfinches *Pyrrhula pyrrhula pyrrhula* (*Ringing & Migration* 19: 48-52) and the 1995/96 invasion of Common Redpolls *Carduelis flammea* and Arctic Redpolls *A. hornemanni* (*Brit. Birds* 93: 59-67). He has also written a number of identification papers, notably on Great Snipe *Gallinago media*, various warblers (Sylviidae), and redpolls.

As befits the contemporary birder, Roger has travelled widely, mainly in the Old World, and has a 'first' for the Western Palearctic to his credit – Lesser Frigatebird *Fregata ariel* in Israel in 1997 (*Brit. Birds* 93: 22-27). He is also passionate about his birding closer to home, in Shetland, where seabirds and migrants are his main interest.

We are delighted to welcome Roger as our new Editor, and wish him well as he guides *British Birds* into the new millennium.

The Directors would also like to take this opportunity of recording their sincere thanks to David Christie, who has done a splendid job as Acting Editor in difficult circumstances between the departure of Tim Sharrock and Roger's arrival.

Richard Chandler



Mark Newell

33. Roger Riddington at the helm of the Observatory's Zodiac inflatable, Fair Isle, Shetland, 1997.

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The Bufflehead in Britain

A review

Alan G. Knox[1]



Dan Powell

ABSTRACT The BOU Records Committee reviewed 16 British records of Bufflehead *Bucephala albeola* up to 1950 and the first two records after that date. Of the older records, many were clouded by fraud or by lack of detail, and only one was considered to be acceptable for Category B of the British List: a female shot on Tresco, Isles of Scilly, on 17th January 1920. The two later records were accepted into Category A: sight records of males at Foxcote Reservoir, Buckinghamshire, from 28th February to 8th March 1961 and, rather more satisfactorily, at West Loch Bee, South Uist, Western Isles, during 14th-18th March 1980. The numbers of this species kept in captivity increased significantly after 1980, and the likelihood of Buffleheads seen in Britain having a captive origin has become much greater.

The Records Committee of the British Ornithologists' Union reconsiders old records of rare birds as part of its ongoing work. Reviews may also be initiated when new information is brought to the Committee's attention. The recent review of the Bufflehead *Bucephala albeola* in Britain (BOU 2001) came about when Peter Allard, of the Great Yarmouth Bird Club, informed us that there were apparently two museum specimens of the first British record of the species, from Great Yarmouth, Norfolk, in 1830. He also queried the identification of a 1932 Norfolk sight record (Allard 1997). The Committee undertook a reassessment of the 1830 claim and a general review of other

1. *On behalf of the British Ornithologists' Union Records Committee*

older records, both accepted and rejected ones. It turned out that most were no longer acceptable, and that they included instances of likely and certain deception and of probable escapes, as well as cases of insufficient documentation – sometimes of birds that may well have been correctly identified and genuinely wild individuals.

This paper summarises the records reviewed, and describes in some detail the case of the 1830 claim from Great Yarmouth.

Older records considered by the Committee

Sixteen records from the period up to 1950 were reviewed, along with a further two after that date. A summary of the comments of the Committee is given (in *italics*) after each record. There was confusion in the older literature concerning the names applied to some duck species, including the Bufflehead. It was important during the review to eliminate several other ducks, and to establish a positive identification when considering female and immature Bufflehead in particular.

Pre-1819 Donovan (1819) illustrated the species in his book on British birds and noted that it was 'very rare in Britain', but gave no further information.

In the absence of further specific details about Donovan's claim, the Committee regarded it as unacceptable.

Yarmouth area, Norfolk, early 1800s Lubbock (in Yarrell 1843) reported that Buffleheads (more than one) had been seen in the Yarmouth area. Lubbock (undated) stated that he had seen Buffleheads [?killed] 'two or three times'. Girdlestone ([1829] 1879) claimed that he had sent one to Lubbock in 1828, although Southwell (in Lubbock & Southwell 1879) recognised the Miller/Rising bird (Yarmouth, about 1830, see below) as 'the only authentic Norfolk specimen'. This could be taken to mean the only skin or stuffed bird, and not to refer to sightings or to birds not preserved. Lubbock seemed to have been familiar with the species, but there was some confusion at that time between the Bufflehead and the Common Goldeneye *Bucephala clangula*.

No real details seem to be available, and it is impossible to disentangle the 1830 Great Yarmouth record from this information. The records, as presented here, were considered to be unacceptable.

Great Yarmouth, Norfolk, winter, about 1830, adult male Specimen in Saffron Walden Museum (see page 67).

Great Yarmouth, Norfolk, winter, about 1830, adult male Specimen in Norwich Castle Museum (see page 67).

Orkney Islands, autumn 1841 Obtained by Stephen Mummery for Margate Museum (Yarrell 1843; Baikie & Heddle 1848). The Margate Museum collection was sold by auction in 1868 (Ticehurst 1909), and the fate of the Bufflehead specimen is uknown. Mummery's honesty has been questioned, and a number of his records of rare birds are clouded by doubt (Ticehurst 1909). Not that this matters: Gurney discovered that the 'Orkney' bird had been collected abroad, and not even in Europe (Harting 1872; Yarrell & Saunders 1885).

No details/not British: not acceptable.

West Mud, Hamoaze, near Devonport, Devon, winter 1841, adult male Reported in Harting (1872). There may have been a muddle with some skins from North America: the bird was in the collection of Dr Tripe of Devonport, who had other American birds in his collection; purchased from Dr Tripe's collection by Rev. W. S. Hore, Barnstaple (Yarrell & Saunders 1885; D'Urban & Matthew 1892). Information about this specimen emerged only about 30 years after its collection, when Harting visited Rev. Hore in September 1870; he saw the bird and got the details from the then owner, not the collector.

Confusion may have been possible over the origin of the specimen, although it was seen by Harting and was presumably correctly identified; no further details are available: not acceptable.

Norfolk, 1850, adult male (plate 34) This specimen in the Natural History Museum, Tring (NHM), was bought from a person called Hubbard, and the bird is listed in Gray (1863). Harting (1872) considered that 'the authenticity of [the record] is very doubtful',

without giving any reasons whatsoever. An index card for this specimen at the NHM at Tring reads:

379
Adult male Norfolk 1850.
Purch. Hubbard
1850.4.8.1



Alan Knox

34. Bufflehead *Bucephala albeola*, said to be from Norfolk, 1850. Natural History Museum, Tring, registration no. 1850.4.8.1.

The specimen was temporarily reregistered as 1996.41.208 during its transfer in 1996 from the Museum's store of mounted specimens to the main collection. The Bufflehead was unlabelled, but it was clearly identified from photographs of the Natural History Museum gallery display in South Kensington, from which the bird had been taken some years previously.

There is no mention of Hubbard in Sharpe (1906). The only other specimen acquired from Hubbard at that time was a Snowy Owl *Nyctea scandiaca*, from Orkney, with registration number 1850.4.8.2.

The NHM Bufflehead is quite unlike the Norwich and Saffron Walden specimens (see page 67). It is poorly set up, squat, and looking up and to the right. It has a short neck, a lop-sided head and asymmetric eyes. The wings are tight across the back and the tips cross extensively. The bill is varnished and the legs and feet are painted red. The eyes are dark brown.

Lee Evans (in Allard 1997) incorrectly stated that this bird was labelled as having been shot in Great Yarmouth in 1830, and that the specimen was at South Kensington.

Identification satisfactory; Harting doubted the authenticity: considering the lack of detail available, this record is not acceptable.

Loch of Strathbeg, Aberdeenshire, 'many years ago', adult male This bird was obtained by the Rev. Smith of Monquhitter, who died in 1854. The specimen went to Banff Museum (Thomas Edward, in Gray 1871). Sim (1903) observed that the bird was not listed in Edward's account of the birds of Strathbeg (Edward 1854) nor in the list of birds given in his biography (Smiles 1877). The latter is based on Edward's list of the birds of Banffshire (Edward 1856-1860). Sim therefore square-bracketed the record, and, following him, all later authors did the same. Strathbeg is, however, in Aberdeenshire, not in Banffshire. Even though Edward included some Strathbeg records in the Banff lists, the Bufflehead record might not necessarily be expected to have appeared in the Banff compilation. The omission from the Strathbeg article may have been an oversight, or Edward may not have been fully aware of the bird in (or around) 1854, when the article was compiled (although this seems unlikely). He told Gray about the specimen (which Gray himself saw) after 1865. Sim, in the poorest of the Scottish regional-fauna series, attempted to discredit much of Edward's work and records. Recent examination of Edward's many contributions shows, however, that he was a careful and experienced observer and recorder. When he had doubts, such as over a Hooded Merganser *Lophodytes cucullatus* and a number of other rare birds, he stated these quite clearly. Sim's rejection of the Bufflehead, a specimen seen by Gray (a reputable author and naturalist), was quite unwarranted. The record is as good as are many other wildfowl records of the time, although no description of the bird is now available.

Dr David Bertie (Peterhead Museum, responsible for Banff Museum) says that this

specimen is no longer at Banff. The collection suffered from neglect at various stages, and the duck, along with many other important specimens, was probably destroyed during one of the periodic clear-outs at the museum.

Gray saw the specimen, but few details are now available and there is no description: not acceptable.

Bridlington, Yorkshire, winter 1864/65, adult male (plate 35) Reported in Cordeaux (1865, 1872) and Harting (1872); shot by Richard Morris on the Bessingby beck, close to town, and passed to Mr Machin (bird-preserver); later in the collection of Mr J. Whittaker, Rainworth Lodge. Now with the Whittaker collection at Mansfield Museum (Naylor 1996).

Vicky Barlow (at Mansfield Museum and Art Gallery) located two catalogue cards, apparently for the same Bufflehead in the collection there (MASMG: BB337 & BB546). The bird was brought to Tring, where we examined it. The specimen is adequately mounted, and unlike the other available 'British' specimens in style. It is greasy, with a dirty, mid-ventral incision. The legs and feet are poorly painted and the bird is mounted on a painted fibrous base. No labels or other marks are attached to the bird or the base to associate the specimen with the original data.

There is limited information about the status of the species in captivity at that time. There were certainly a number of large waterfowl collections in Britain, and many species were brought in from North America. No Buffleheads, however, were kept at London Zoo between 1828 and 1927 (Low 1929), which suggests that they were probably not very common, and Tim Inskipp has commented that breeding in captivity was unrecorded anywhere until the late 1920s or 1930s. As such, an escape from captivity would seem to have been unlikely.

Inadequate evidence of association of specimen with data: not acceptable.

Loirston Loch, Aberdeen, January 1865, adult male In Gray (1871): formerly in the possession of Mr Angus; square-bracketed by Sim (1903), again without reason, although possibly because of the personal antagonism that existed between him and Gray (AGK). Sim's book related to the Dee faunal area, and he noted that Loirston, despite its proximity to Aberdeen, fell outside this. Even so, his square-bracketing was in turn followed, without discussion, by Harvie-Brown (1906), Witherby *et al.* (1940) and Baxter & Rintoul (1953). Gray (1871) saw this bird ('a beautiful male'), and its rejection may have been unwarranted.

Again, Gray saw the specimen but few details are available: not acceptable.

Cheltenham, Gloucestershire, about December 1869, adult male Specimen at Norwich Castle Museum, number 31.71. The museum accession register records that this specimen was said to have been shot on Dial Pool (Geo. W. Russels), Cheltenham, by G. F. White, son of the Cheltenham bird-stuffer Mr [T.] White. It was claimed to have been seen in the flesh by several local notables. Gurney contacted one, the Rev. H. Price, 'who said he would vouch for it but I doubt it for all that as White said another was got & the tarsi are much split'. The closeness of the date and location to those claimed for the Ruby-crowned Kinglet *Regulus calendula* mentioned on



Alan Knox

35. Bufflehead *Bucephala albeola*, said to be from Bridlington, Yorkshire, 1864/65. Mansfield Museum, registration no. MASMG: BB337/BB546.

page 66 is of concern. Fraud or escape from captivity may have been possible.

Norwich Castle Museum specimen 31.71: insufficient information, and doubted by Gurney: not acceptable. Second specimen said to have been obtained by White: not acceptable.



Hugh Clark

36. Bufflehead *Bucephala albeola*, said to be from Eriskay, Western Isles, 1870. Mackay collection, Wick.

Eriskay, South Uist, Western Isles, June 1870, adult male (plate 36) Shot; the specimen was earlier reported to be in the Carnegie Museum, Wick (Pennie & Gunn 1951). This record was accepted by Baxter & Rintoul (1953) but, for some reason, it was not included in the fifth edition of the BOU list (BOU 1971). The Committee is unaware of this record having ever been formally assessed. It was accepted by Sharrock & Sharrock (1976) and by Dymond *et al.* (1989). The bird was collected by Eric Sinclair Mackay, and forms part of the Mackay collection of ducks.

The Mackay collection includes the following other birds (from Pennie & Gunn 1951). Note that all are listed as adult males, and all were said to have been collected in May, June, July or August:
Ruddy Shelduck *Tadorna ferruginea*, ad male, South Uist, Western Isles, June 1868
Ferruginous Duck *Aythya nyroca*, ad male, Skye, Highland, May 1898
King Eider *Somateria spectabilis*, ad male, Shetland Islands, August 1869
Smew *Mergellus albellus*, ad male, Shetland Islands, August 1885
Hooded Merganser, ad male, Shetland Islands, July 1884

There seems to have been some doubt about all of these. The North Highland Archive in Wick holds a manuscript volume based on articles written by Mackay, copied by hand some time after their publication in a local newspaper (Mackay, no date). Inserted into this volume is a photocopy of Pennie & Gunn (1951) carrying the anonymous annotation 'These are all obviously bogus' (B. Lees and R. Walker *in litt.*). Evans (1994) mentions that Mackay was suspected of fraud, although he does not say by whom; he notes that all the rare ducks are adult males in pristine plumage regardless of the time of year at which they were said to have been collected; no more specific evidence is offered, however.

The Carnegie Museum no longer exists under that name. The collection is now housed in the Bruce Building, Wick. The local authority (Highland Council) has no curator at the moment. In July 1997, Hugh Clark visited the Bruce Building and photographed some of the Mackay specimens on behalf of the Records Committee. Most of the birds of interest are in glass-fronted cases fixed to the walls of the gallery, which was not at that time open to the public. The Bufflehead was in a case with a Garganey *Anas querquedula*, and the nearby label (dating from perhaps around 1990) fixed to the wall states, apparently erroneously, that the Bufflehead was reputed to be the only record ever from Caithness (it is supposed to have been from the Hebrides). Clark was unable to locate the Smew. He reported that the King Eider was in full breeding plumage, with no immediately obvious signs of moult.

After examining Hugh Clark's photographs, Keith Vinicombe commented that the plumage of the Hooded Merganser appeared to be incompatible with the claimed date of collection. The Ruddy Shelduck and Bufflehead plumages might possibly be consistent with the claimed dates,

but the described plumages of the King Eider and Smew would certainly be incongruous. As such, the provenance of the whole group must be dubious.

On the evidence available, the Mackay ducks would seem to be suspect: not acceptable.

Shetland Islands, 25th November 1912, adult male The specimen is in the Booth Museum, Brighton, Sussex. This bird was originally thought in error to have been from Orkney (Booth & Griffith 1927), but the details were later clarified (Griffith 1931). It was shot in Shetland, and was sent to Clarke, the Cheltenham taxidermist (see Frost 1987), who sold it to Sir Vauncey Harpur Crewe in January 1913. It was then purchased from the Harpur Crewe collection on the latter's dispersal and was presented to the Booth Museum. The case that housed this bird was broken up in the 1970s because of woodworm, but the specimen is still at the Museum, number 207.393 (November 1996). This record appears not to have reached the wider literature.

Clarke and Harpur Crewe featured in previous Committee discussions relating to unacceptable Ruby-crowned Kinglet records. A relevant extract is repeated here (from Knox 1994):

> A second Ruby-crowned Kinglet was said to have been shot at Highnam Court, near Gloucester, on 21st September 1871, and is now preserved at the Booth Museum in Brighton (Booth & Griffith 1927). This specimen never received the exposure of the Loch Lomond bird, although it was listed by Alexander & Fitter (1955). It was regarded as probably having come off a ship in Gloucester Docks by Mellersh (1902). Indeed, its provenance is rather questionable. It was shot by the '... head gamekeeper named Spring, ... stuffed by White, whose grandson, E.T. Clarke, the Cheltenham bird-stuffer, bought it of Spring and sold it in 1899 to Sir Vauncey Harpur Crewe, on whose death it was bought back by Clarke, from whom it was thereupon bought and presented to the [Booth] Museum by A.F. Griffith' (Booth & Griffith 1927). It is now mounted in a case and appears to have no original labels. Sir Harpur Vauncey Crewe [*sic*] 'spared no expense in acquiring ... rare species for his collection, but unfortunately took much less care in testing the genuineness as British of the rarities offered to him; and the high prices he was prepared to pay without close investigation offered a great temptation to dealers, so that many of the birds he obtained as British-killed are of very doubtful authenticity' (Booth & Griffith 1927). Even though Griffith believed the kinglet to have been properly authenticated, the BOURC has been unable to trace any supporting documentation either at the Booth Museum or through the Derbyshire Record Office where the Harpur Crewe family archives are deposited. Some doubt must remain about this kinglet and the record is best forgotten once more.

The Shetland Bufflehead, too, would appear to be open to some doubt.

The association with Clarke and Harpur Crewe is sufficient to place doubt upon this specimen: not acceptable.

Orkney Islands, December 1918, female This specimen was formerly in the Church Street Museum, Brighton (Booth & Griffith 1927; Griffith 1931). It is now at the Booth Museum, number 206.732 (November 1996). As with the preceding record, this one appears not to have reached the wider literature. In Booth & Griffith (1927), the 'Orkney' records (this one and, by mistake, the Shetland bird above) are listed as requiring corroboration. The Committee was unable to trace any evidence in support of this Orkney claim.

'Needing corroboration': not acceptable.

Tresco, Isles of Scilly, 17th January 1920, female (plate 37) Shot by Miss Dorrien Smith (Anon. 1920; Langton 1920), later in the Tresco Abbey collection (Penhallurick 1969). In Penhallurick (1969) and Evans (1994), the date is given incorrectly as 7th January. The specimen is now in the Isles of Scilly Museum, St Mary's (*contra* Evans 1994). No description has ever been published, but David Cottridge provided a photograph of the specimen for the Committee to examine. The Dorrien Smith family held the lease on Tresco from the mid-1800s and frequently shot rare birds on the island. Will Wagstaff, as recorder for the Isles of Scilly, is familiar with material collected by the Dorrien Smiths and is unaware of any doubts concerning this or any other birds which they obtained (W. Wagstaff *in litt.*).

See the 1864/65 Bridlington record, on page 64, for comment on escape likelihood.

The Committee accepted the identification of this bird, sexed as a female; the circum-

stances seem generally to be satisfactory. It was considered likely to have been a natural vagrant, and this record was placed in Category B of the British List, and is the earliest British record.



David Cottridge

37. Bufflehead *Bucephala albeola*, Tresco, Isles of Scilly, 1920. Isles of Scilly Museum.

Hunstanton, Norfolk, seen on several dates in February 1932, immature/ female In Riviere (1933). Seen by Mr C. T. M. Plowright; watched through a telescope, once as close as 40 yards. Plowright was described by Riviere (1933) as a good observer. The bird was also seen by Nat Tracy (see E. W. R. 1955 for biographical details). Allard (1997) has drawn attention to the brevity of the existing description, although he misquotes it in one important detail, changing the original *oblong* white patch on each side of the cheeks to an *obvious* white patch. The duck was seen with Velvet *Melanitta fusca* and Common Scoters *M. nigra*, and observed down to 40 yards, by a good observer with a telescope. The description is, however, very short. Even so, both the 'very noticeable' small size in direct comparison with Common Scoter, and the description, seem to support the claimed identification. Nevertheless, this is a very rare species and some more detail would have been preferred.

See the 1864/65 Bridlington record, on page 64, for comment on escape likelihood.

The briefness of the description, though typical of the period, was felt on balance to be insufficient for such a rare species, and the identification was not accepted.

The 1830 Yarmouth specimens at Norwich Castle and Saffron Walden Museums

The two specimens claimed to represent the first British record, collected at Yarmouth in 1830, were brought to Tring, where they were examined in detail.

The Saffron Walden Museum specimen (plate 38)

This specimen is on a circular wooden stand, painted green and fixed to a rectangular wooden block with sloping front, also painted green. There



Alan Knox

38. Buffleheads *Bucephala albeola*, said to be from Great Yarmouth, 1830. Left, Saffron Walden Museum, registration no. SAFWM:(NB 127); right, Norwich Castle Museum, registration no. 22.85.

is a label on the front slope, although there are also marks and the remains of pins from a previous label. The rear of the base block has paint over what appears to be the handwritten number 308a (the 1883 catalogue number for the Bufflehead). The label on the front slope reads:

> Buffel-headed Duck
> *Bucephala albeola* (L.)
> male, from Yarmouth, winter 1830

There is also a gummed label on the rectangular base:

> NB
> 127

Written in pencil under the base block is:

> Buffel-headed Duck
> male
> Yarmouth
> winter 1830

It is an adult male, standing fairly upright, head turned slightly to the left, neck reasonably stretched. Narrow head, wide back; wings wide, the tips about 15 mm apart. The bend of the wing is not under the flank feathers at the moment, but may have been earlier.

The irides in the glass eyes are pale blue. The bill has apparently not been painted, although it may have been varnished at some stage. The legs and feet are painted dull red, except where they were later overpainted by green when the base was painted.

The Norwich Castle Museum specimen (plate 38)

The specimen carries a single circular label:

> Norwich Castle Museum [printed]
> 22.85

It is a good mounted bird, well prepared, which was removed from the public gallery in 1996 for our examination. The shape and posture are very like those of the Saffron Walden specimen, although the bird is less bulky. The head is less full and the neck is slightly longer. The wing tips are about 5 mm apart. The bend of the wing (only) is concealed under flank feathers.

The specimen was not on a base when it was examined, and was presumably removed from an individual base some time ago when it was put into the public gallery. The legs are wired, but the left leg wire is broken off at the foot; the right wire is intact. The undersides of the feet have wisps of cotton and moss adhering to them.

The primaries are quite faded by light. The specimen is not particularly worn, except for parts of the tail. There are a couple of small spots of blue paint on the upperparts.

The irides of the glass eyes are yellow. The upper mandible is painted blue, as also are the legs and feet.

The specimens feel very similarly stuffed, but the birds were not examined internally. The most striking features are, however, the overall similarities in their style and posture. This would be a remarkable coincidence, unless the skins had been prepared by the same taxidermist. To determine if these similarities extended to their internal structure, the birds were x-rayed.

X-ray comparison of the two specimens

X-rays of the two specimens were prepared at the Natural History Museum, showing each bird from the left side and in dorsal view (plates 39-42). Details from the x-ray images are summarised in table 1 (on page 70). The similarities in the internal structure of the two specimens are striking, and are consistent with the suggestion that the skins had been prepared by the same taxidermist. The differences are largely trivial, or may be accounted for by their being within the range of variation to be expected from one taxidermist. The most significant difference, in the humeri, may have been due to damage to one of the bones during collection or preparation, and the other bone having then been treated to become the same. This would be expected. The combined evidence from external and x-ray examination very strongly suggests that the birds were prepared by the same taxidermist. From the colour of the eyes and the other bare parts of both these specimens, there must be some doubt that the taxidermist saw either of the birds when they were freshly dead, unless he had an odd sense of humour.

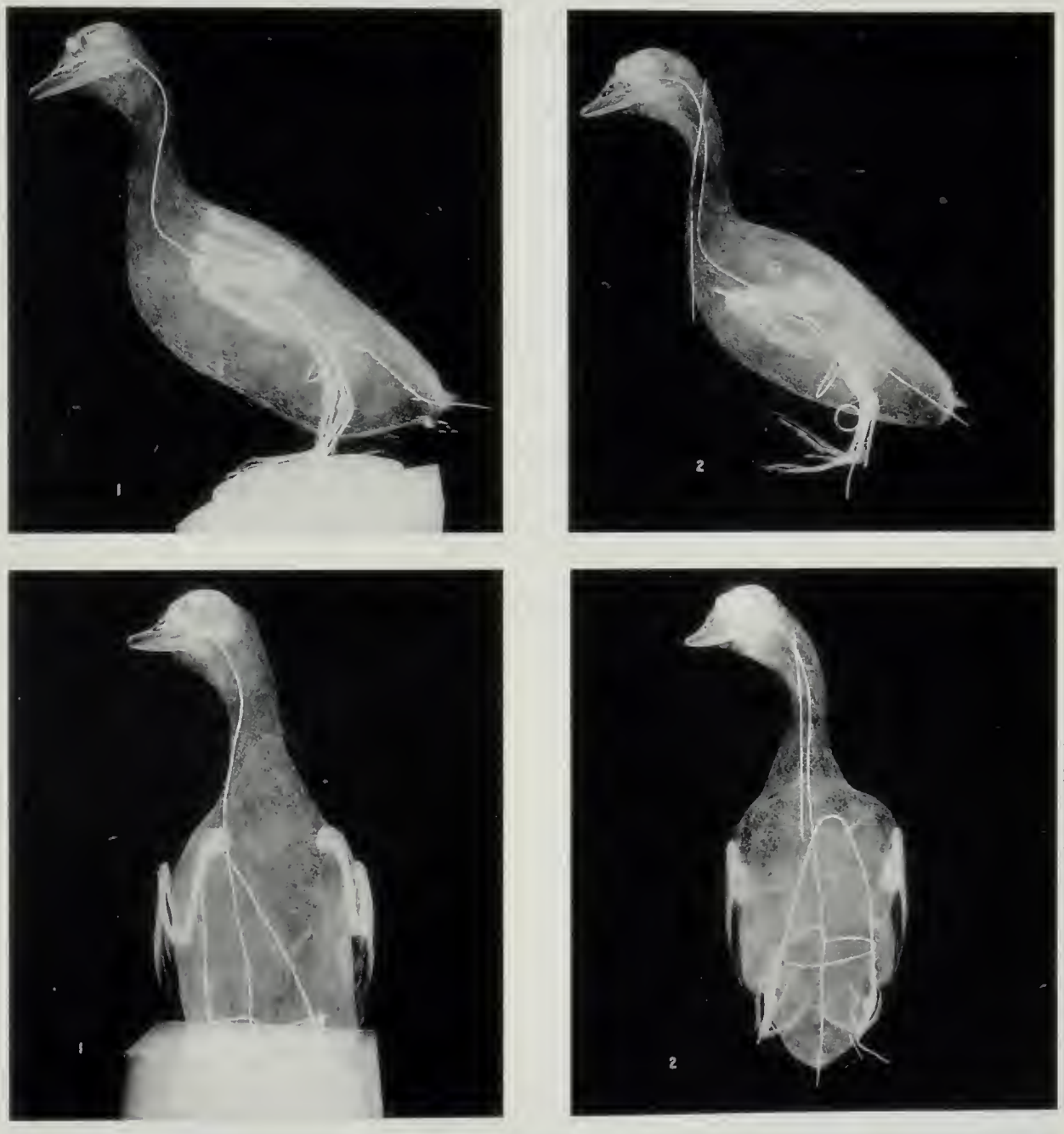
The history of the two specimens

The records are quite well documented; the key points being the following:

- Paget & Paget (1834): Mr Miller has a specimen; adult male.
- Yarrell (1843): male shot near Yarmouth, passed to Mr Stephen Miller, 'who prized it very highly'. Mr Joseph Clarke of Saffron Walden is reported to have sent Yarrell a drawing of

Miller's bird, and to have loaned him a male and a female which he described (Yarrell 1843). There is no contemporary written evidence that Miller's bird was actually at Saffron Walden Museum at that time, but there are sufficient similarities between the Saffron Walden specimen and Yarrell's illustration (plate 43 on page 71) to make this connection. The plate was apparently engraved as a faithful reproduction and, in the process of printing, was reversed on the paper (hence, the bird in the book is looking to the right, whereas the specimen, and its image on the engraved plate, were facing left). The bird's posture and several details of its plumage make it almost certain that the Saffron Walden specimen was the model for Yarrell's plate. This would confirm the much later statement in Anon. (1883) that the Saffron Walden bird had been figured by Yarrell.

- Anon. (1845): The Saffron Walden Museum catalogue lists a male and female, but without data.
- Lubbock (1845): Mr Miller of Yarmouth has a very good specimen of the 'Buffel-head'.
- Harting (1872), Lubbock & Southwell (1879): Mr Miller's bird now in the collection of Mr Rising.
- Anon. (1883): The Saffron Walden bird is the one figured by Yarrell. Miller's bird went to Mr Youell, a banker, and was then given to Joseph Clarke, who gave it to Saffron Walden Museum. Youell is not known by the staff at Saffron Walden Museum. Clarke travelled widely and obtained objects for Saffron Walden Museum from all over the country (Nick Gordon *in litt.*; see also Anon. 1895, Christy 1890).



Natural History Museum/Harry Taylor

39-42. X-rays of Buffleheads *Bucephala albeola*, said to be from Great Yarmouth, 1830. Left, Saffron Walden Museum, registration no. SAFWM:(NB 127); right, Norwich Castle Museum, registration no. 22.85.

Table 1. Similarities and differences between the Saffron Walden Museum (SW) and Norwich Castle Museum (NC) Bufflehead *Bucephala albeola* specimens in x-ray images.

Features similar in both specimens	Main differences between the specimens
Stuffing similar and uniform throughout; similar wads of thigh stuffing.	Body of SW larger and bulkier.
Back of the skull broken to extract the brain.	Artificial eyes smaller in SW.
Mounting wires similar in type.	Extra straight wire down neck in NC, apparently inserted some time after preparation was complete, when the neck was broken. Lower end sharpened. Both ends protrude through skin and are concealed among the feathers.
Main support wire from base of bill (blunt end) gently curving down neck and body; looped sideways in lower body around right leg wire, across and around left leg wire, back to centre, then looped around itself and down to exit body just under tail.	Wire apparently starts higher in bill base in SW; the other end of the wire (under tail) is pointed in SW, but blunt in NC. It may have been cut after mounting if the wire had simply been too long.
Continuous leg wire used for both feet, looped inside body to the level of the bend in the wing.	
Wing bones set similarly.	Humeri intact (disarticulated) in SW; both humeri broken to approximately 30% of full length in NC.
Femurs broken, and at approximately the same length.	

- Anon. (1885a): Mr Rising's collection was sold in 1885, and the Bufflehead from Yarmouth in 1830 ('one of the gems of the collection') went to Norwich Museum.
- Anon. (1885b): The specimen belonging to Mr Rising of Horsey was purchased on 17th September 1885 by Mr J. J. Colman, Esq. MP, for 25 gs. 'Mr Risings note on this bird in his copy of "Yarrell" is "Purchased 22 September 1853 at the sale of goods of Mr S. Miller deceased, by me R.H. Rising".'
- Southwell (no date, about 1885 or later): Miller's duck was sold on 22nd September 1835 [a transcription error: this should read 1853] to Mr Rising for £5. Rising's collection was sold on 17th September 1885, the Bufflehead making £26.5.-; the specimen was purchased for Norwich Castle Museum.
- Saunders (1889): Mr Rising's specimen has been purchased and is now in Norwich Museum.
- Allard (1990) notes that the bird was shot at 'almost certainly Breydon'. It is not clear where this information comes from.
- Evans (1994) is apparently the first to suggest (incorrectly) that the bird went from Miller to Rising to Saffron Walden Museum (mistakenly attributing this information to Allard 1990).

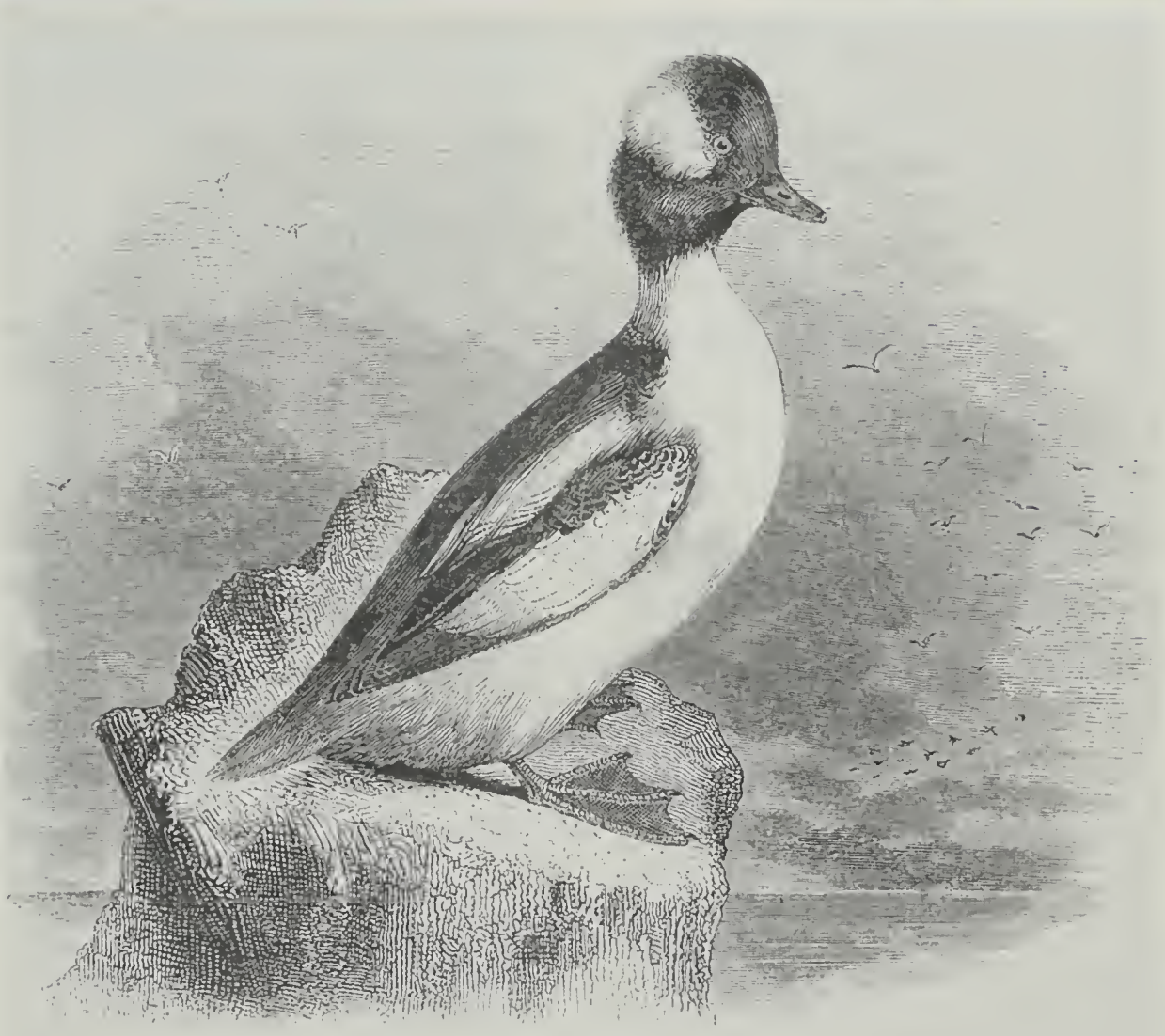
Summary of the information

1. The specimen at Saffron Walden Museum is alleged to have been collected in 1830, and acquired by Miller by 1834; it then passed to Youell, to Clarke and then to the Museum, apparently before 1843 when this specimen was illustrated by Yarrell.
2. The Norwich Castle Museum Bufflehead is also said to have started in Miller's possession. Rising bought the specimen at the sale of Miller's goods in 1853, and it was purchased by Colman in 1885 (following Rising's death) for Norwich Castle Museum.

Of the named persons, Miller seems to be the most likely candidate for the source of the confusion and, possibly, fraud. Several stages in this story are, however, unclear, and genuine mistakes and misattribution of data are possible.

There is clear evidence of mischief associated with the two Yarmouth Bufflehead specimens: apparently set up by the same taxidermist and bearing the same data. Neither can be considered satisfactory in these circumstances: neither is acceptable.

As a consequence, only one pre-1950 (Category B) record of Bufflehead remains acceptable: the female from Tresco, Isles of Scilly, on 17th January 1920.



University of Aberdeen

43. Bufflehead *Bucephala albeola*, said to be from Great Yarmouth, 1830. From Yarrell (1843).

Post-1950 records

To determine whether the Bufflehead should be placed in Category A, the Committee also considered the earliest records after 1950.

Male, Foxcote Reservoir, Buckinghamshire, 28th February to 8th March 1961 (Swaine 1962) Although this bird did not appear in a location to inspire confidence that it was a transatlantic vagrant, a number of American ducks have subsequently turned up in late winter in the Midlands. There were hardly any Buffleheads in captivity in 1961, but four were imported into the Netherlands in October 1960. One of those four escaped on arrival; it was seen in the wild and was extremely wary, and it was at first considered to be a natural vagrant (W. Bierman *in litt.*). The likelihood that the Buckinghamshire bird was the same individual was excluded and, taking into consideration the rarity of the species in captivity, the probability of its having been an escape was considered to be very low (P. Scott, T. Inskipp, R. Wilkinson).

On review, the Committee confirmed this record's position in Category A.

Male, West Loch Bee, South Uist, Western Isles, 14th-18th March 1980 (Rogers *et al.* 1981) The identification was accepted. The location, weather and time of year (Gauthier 1993) are all consistent with natural vagrancy. Although numbers in cap-

tivity were increasing at this time, Bufflehead were still scarce in collections and escape was considered to have been less likely than natural occurrence.

The record was accepted for Category A.

Subsequent records are the responsibility of the British Birds Rarities Committee (BBRC). Four have been noted, with varying degrees of enthusiasm, in that committee's annual reports. All have been males.

- Colwick, Nottinghamshire, 17th-26th March 1994 (*Brit. Birds* 88: 504)
- Coatham Marsh, Cleveland, 1st-7th June 1994 (*Brit. Birds* 88: 504)
- Heveningham Hall Lake, Suffolk, 29th November 1997 to 21st January 1998 (*Brit. Birds* 91: 470; 92: 568)
- Roadford Reservoir, Devon, 20th November 1998 to 13th March 1999 (*Brit. Birds* 92: 568; 93: 525)

Over the last twenty years, the number of Buffleheads in captivity has increased dramatically, both in Britain and on the Continent. Following a survey in 1991, it was estimated that over 900 were held in captivity in the Netherlands alone (van der Laar *et al.* 1994). Since the 1980s, the likelihood of a Bufflehead seen at liberty in Britain being of captive origin has become very high indeed.

Rolf Christensen has compiled a useful review of European records of the Bufflehead, which can be viewed online (http://home5.inet.tele.dk/rolfc/other_stuff/boffelander.htm).

Acknowledgments

The investigations into these records took some time. Many people were involved, some to a considerable extent. I should like to thank Mark Adams, Dr Robert Prys-Jones, Harry Taylor, Cyril Walker (all of the Natural History Museum, Tring), Peter Allard, Ralph Anderson (Canterbury City Museums), Vicky Barlow (Mansfield Museum and Art Gallery), Dr David Bertie (Peterhead Museum), Rolf Christensen, Hugh Clark, David Cottridge, Ian Dawson, Kim Downie (University of Aberdeen, Special Libraries and Archives), Nick Gordon (Saffron Walden Museum), Tim Inskipp, Dr Anthony Irwin (Norwich Castle Museum), Brenda Lees (North Highland Archive), Dr Gerald Legg (Booth Museum, Brighton), Prof. David Parkin, Ian Robertson (Highland Council, Wick), Keith Vinicombe, Mrs F. E. Warr (Natural History Museum Library), Will Wagstaff and Robert Walker. Steve Dudley, Ian Dawson, David Parkin and members of the BOURC commented on the file during circulation or on a draft of this article.

References

Allard, P. R. 1990. *The Birds of Great Yarmouth.*

— 1997. The Bufflehead - a Norfolk bird or not? *NBC Bulletin* No. 22, September-November 1996: 8-9.

Anon. 1920. Buffel-headed Duck in Scilly. *Brit. Birds* 14: 67.

— 1845. *An Abridged Catalogue of the Saffron Walden Museum.*

— 1883. Manuscript *Catalogue of British birds and mammals in the Saffron Walden Museum.* Pages 129-130. Saffron Walden Museum.

— 1885a. Sale of the late Mr Rising's collection of birds. *Field* 26 September 1885.

— 1885b. Accession register entry for Bufflehead 22.85. Norwich Castle Museum.

— 1895. Death of Mr Joseph Clarke F.S.A. of Saffron Walden. (Transcription of unknown newspaper clipping in Saffron Walden Museum accession register.)

Baikie, W. B., & Heddle, R. 1848. *Historia Naturalis Orcadensis.* Zoology. Part 1. Edinburgh.

Baxter, E. V., & Rintoul, L. J. 1953. *The Birds of Scotland.* Edinburgh.

Booth, E. T., & Griffith, A. F. 1927. *Catalogue of cases of birds in the Dyke Road Museum, Brighton.* 5th edn. Brighton.

British Ornithologists' Union. 1971. *The Status of Birds in Britain and Ireland.* Oxford, London & Edinburgh.

— 2001. British Ornithologists' Union Records Committee: 27th Report (October 2000). *Ibis* 143: 171-175.

Christy, R. M. 1890. *The Birds of Essex.* Chelmsford & London.

Cordeaux, J. 1865. Ornithological notes from Flamborough. *Zoologist* 1865: 9655-9660.

— 1872. *Birds of the Humber District.* London.

Donovan, E. 1819. *The Natural History of British birds.* vol. 10, plate 226 & 2 accompanying pages (unpaginated). London.

D'Urban, W. S. M., & Matthew, M. A. 1892. *The Birds of Devon.* London.

Dymond, J. N., Fraser, P. A., & Gantlett, S. J. M. 1989. *Rare Birds in Britain and Ireland.* Calton.

Edward, T. 1854. The birds of Strathbeg and its neighbourhood, with a few remarks upon their habits. etc. *Naturalist* 4: 239-247, 263-271.

— 1856-1860. A list of the birds of Banffshire, accompanied with anecdotes. *Zoologist* 14 (1856): 5117-5122, 5199-5202, 5258-5268; 17 (1859): 6595-6601, 6631-6637, 6665-6672; 18 (1860): 6841-6849, 6964-6975.

Evans, L. G. R. 1994. *Rare Birds in Britain 1800-1990.* Little Chalfont, Bucks.

E. W. R. 1955. Personalities – 19. Nat Tracy. *Bird Notes* 26: 201 & plate L.

Frost, C. C. 1987. *A History of British Taxidermy.* Sudbury.

Gauthier, G. 1993. Bufflehead (*Bucephala albeola*). In: Poole, A., & Gill, F. (eds.), *The Birds of North America*, No. 98. Philadelphia & Washington.

Girdlestone, C. S. [1829] 1879. (Letter.) *Trans. Norfolk & Norwich Naturalists' Society* 2: 398-399.

Gray, G. R. 1863. *Catalogue of British birds in the collection of the British Museum.* London.

Gray, R. 1871. *The Birds of the West of Scotland, including the Outer Hebrides.* Glasgow.

Griffith, A. F. 1931. *Supplemental catalogue of cases of birds in the Dyke Road Museum, Brighton.*

Supplement to 5th edn. Brighton.
Harting, J. E. 1872. *A Handbook of British Birds*. 1st edn. London.
Harvie-Brown, J. A. 1906. *A Fauna of the Tay Basin & Strathmore*. Edinburgh.
Knox, A. 1994. From the archives: the Loch Lomond Ruby-crowned Kinglet. *Birding World* 7: 73-78.
Langton, H. 1920. (Notice about Buffel-headed Duck shot, Tresco.) *Bull. BOC* 40: 155.
Low, G. C. 1929. *List of the Vertebrated Animals exhibited in the Gardens of the Zoological Society of London, 1828-1927. Volume II. Birds*. London.
Lubbock, R. Undated. *Manuscripts*. Vol. II. Notes for *Fauna of Norfolk*. Norwich Castle Museum Accession number 10.80. Pages 246-249.
— 1845. *Observations on the Fauna of Norfolk*. 1st edn. London.
— & Southwell, T. 1879. *Observations on the Fauna of Norfolk*. New edn. Norwich.
Mackay, E. S. Undated. *Caithness Bird Life*. Manuscript volume. North Highland Archive, Wick.
Naylor, K. A. 1996. *A Reference Manual of Rare Birds in Great Britain and Ireland*. Nottingham.
Paget, C. J., & Paget, J. 1834. *Sketch of the Natural History of Yarmouth and its Neighbourhood*. Yarmouth.
Penhallurick, R. D. 1969. *Birds of the Cornish Coast, including the Isles of Scilly*. Truro.
Pennie, I. D., & Gunn, J. M. 1951. Birds in the Wick Museum. *Scot. Naturalist* 63: 196-197.
Rivière, B. B. 1933. Ornithological report for Norfolk for 1932. *Brit. Birds* 26: 318-329.
Robinson, H. W. 1926. On recording birds of doubtful authenticity as British. *Ibis* 1926: 629-631.
Rogers, M. J., & the Rarities Committee. 1981. Report on rare birds in Great Britain in 1980. *Brit. Birds* 74: 453-495.
Saunders, H. 1889. *An Illustrated Manual of British Birds*. 1st edn. London.
Sharpe, R. B. 1906. *History of the Collections Contained in the Natural History Departments of the British Museum*. vol. 2. London.
Sharrock, J. T. R., & Sharrock, E. 1976. *Rare Birds in Britain and Ireland*. Berkhamsted.
Sim, G. 1903. *The Vertebrate Fauna of "Dee"*. Aberdeen.
Smiles, S. 1877. *Life of a Scotch Naturalist*. 5th edn. London.
Southwell, T. Undated (1885 or later). Manuscript notes extracted from Rising's copy of Yarrell. In Southwell's copy of Lubbock & Southwell, Norwich Castle Museum.
Swaine, C. M. 1962. Report on rare birds in Great Britain in 1961 (with 1959 and 1960 additions). *Brit. Birds* 55: 562-584.
van der Laar, B., Maas, P. A., Vossen, P., & van den Berg, A. 1994. Geese and ducks in captivity in the Netherlands in 1991. *Dutch Birding* 16: 148-154.
Ticehurst, N. F. 1909. *A History of the Birds of Kent*. London.
Witherby, H. F., Jourdain, F. C. R., Ticehurst, N. F., & Tucker, B. W. 1940. *The Handbook of British Birds*. vol. 3. London.
Yarrell, W. 1843. *A History of British Birds*. vol. 3. 1st edn. London.
— (& Saunders, H.) 1885. *A History of British Birds*. vol. 4. 4th edn. London.

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Determination of the origin of British feral Rose-ringed Parakeets

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Dan Powell

ABSTRACT Four subspecies of Rose-ringed Parakeet *Psittacula krameri* are recognised, two African and two Indian. The likely origin of those individuals living in the wild in Britain was investigated by comparing body measurements and colour characters of 180 museum specimens from throughout the species' natural range with those of British feral specimens and captive individuals. Body length and bill length proved to be the parameters most likely to differ among all four subspecies, while toe and wing measurements also differed between some subspecies. Colour characters were of limited use, with the exception of bill colour, which could be used as a secondary criterion for classifying certain individuals. The British parakeets appear to be of Indian type; their wing and toe lengths are similar to those of the northern subspecies *borealis*, while their bill lengths correspond to those of southern *manillensis*. Since bill colour is highly variable, it is possible that the birds derive from a mixture of the two Indian subspecies.

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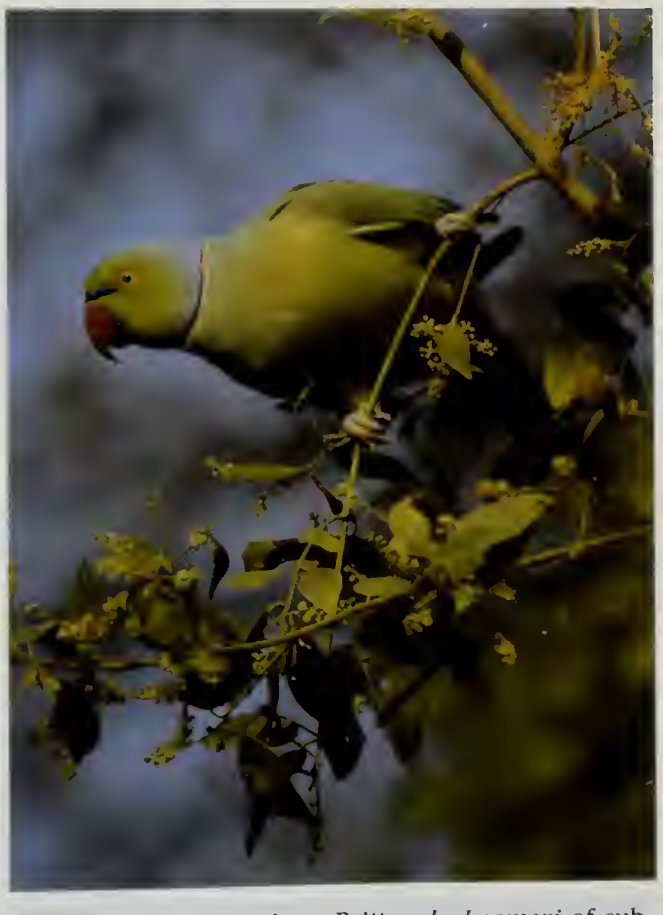
Rose-ringed Parakeets *Psittacula krameri* established feral colonies in southeast England in the 1970s (Morgan 1993). Since then, a large subpopulation, numbering over 1,000 individuals, has become well established to the west of London, along with two smaller ones, one in southeast London and the other on the Isle of Thanet, in Kent (Pithon & Dytham 1999). The species' natural range extends across northern subtropical Africa and, in Asia, from Pakistan east to central Myanmar (formerly Burma) and south to Sri Lanka (Forshaw 1989; Juniper & Parr 1998). Large numbers of both African and Indian parakeets have been imported into Britain by the pet trade (Inskipp 1975), and the subspecific identity of the feral populations remains uncertain.

There are four subspecies of the Rose-ringed Parakeet. In Africa, the nominate subspecies occurs from Senegambia and south Mauritania eastwards to south Sudan and west Uganda, while *P. k. parvirostris* is found from east Sudan (Sennar district) and north Ethiopia to Djibouti and north Somalia (Forshaw 1989; Juniper & Parr 1998). The two Asian subspecies are separated roughly by latitude 20°N, which crosses the Indian peninsula: *P. k. manillensis* occurs south of this line, and *P. k. borealis* north of it (Forshaw 1989; Juniper & Parr 1998).

The subspecies are distinguished from each other by biometric measurements and by the coloration of the bill and neck-ring. According to the available literature (which is based on small samples), both of the Indian subspecies are larger than the two African ones in terms of their wing, tail and bill lengths and their body weights, and males are also slightly larger than females. The lower mandible of African *krameri* and Asian *borealis* is red and black, while the other two subspecies have an entirely black lower mandible, and *borealis* is thought to differ further in having the head plumage 'suffused with blue' (Cramp 1985; Forshaw 1989). Morgan (1993), who compared the available data with wing lengths and weights of six specimens caught in Surrey, suggested that the British birds were large and seemed likely to be of the northern Indian subspecies *borealis*, a view supported by observations of bill colour, although the difficulty of obtaining clear views of the lower-mandible colour in the field was stressed. Morgan's (1993) conclusions were tentative, and he highlighted the need for further study of feral parakeets in the hand.

Museum specimens

A collection of over 200 Rose-ringed Parakeet skins, from the entire native range, is held at the Natural History Museum in Tring, Hertfordshire. We measured the 180 of these skins that were in suitable condition, and took a description of each of them. From the museum label, the location at which the bird was collected, the name of the subspecies and the sex were noted. Mature males, aged three or over, have a neck-ring (Juniper & Parr 1998; Low 1992); for all other specimens, the method used for sexing, such as description of the gonads, was noted. The following biometrics were taken: total length and tail length (summed to provide a measure of body length); wing length; bill length, from tip to cere; and length of the



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44. Rose-ringed Parakeet *Psittacula krameri* of subspecies *borealis*, Rajasthan, northwest India, December 2000.

(easily accessible) right middle toe. The colours of the neck-ring and the upper and lower mandibles were recorded, and descriptions of eye and foot colours, when given by collectors, were also noted.

Live specimens

In addition to the data gathered from six Rose-ringed Parakeets ringed before 1993 (Morgan 1993), further information was provided by the Hersham and Runnymede Ringing Groups for parakeets captured in Surrey. Several mist-netting sessions were undertaken at two roost sites and in four gardens, enabling more individuals to be caught, measured and described in full. Since wild parakeets may be expected to derive from the subspecies most commonly kept in captivity, and since the sample of live specimens is still relatively small, a number of captive individuals were also measured and described.

Assignment of subspecies and sex classes

Each specimen was given a subspecies code according to the location from which it was collected, irrespective of the name on the museum label. Most of the African skins came from west or central Sudan and from West African countries, and were therefore assigned to the nominate race *krameri*. The vast majority of the Asian specimens were collected in northern India, from Punjab across to Assam, and in Nepal, and were assigned to *borealis*. The samples of *parvirostris*, from Ethiopia, Somalia and east Sudan, and of *manillensis*, mainly from Sri Lanka, were much smaller.

Almost twice as many males as females were represented in the museum collection. In some cases, individuals had been labelled as female without any proof that this was the case. Three 'sex classes' were therefore created: known males, known females, and those of unknown sex (i.e. females or immature males). In an attempt to classify better the individuals of unknown sex, we carried out one-way analysis of variance (ANOVA) to test the effect of sex class on each of the five biometric variables, followed by post-hoc (least significant difference: LSD) tests to determine any differences between sex classes. Bill, tail and wing lengths were all significantly affected by sex. Moreover, all the LSD tests showed that, for those parameters, specimens of unknown sex were closer in size to known females than to known males. On this basis, all unknowns were grouped together with the females for the purposes of further analysis of sex differences and were termed 'females', although they could have included a proportion of juvenile males.



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45. Rose-ringed Parakeet *Psittacula krameri* of subspecies *borealis*, Rajasthan, northwest India, December 2000.

Analysis of skin biometrics

Since live samples of each of the subspecies were not available, it was not possible to determine whether live and dead specimens were similar. The biometrics of museum skins were therefore analysed in isolation. Two-way ANOVAs were performed to test the effects of sex and subspecies on each of the five variables. All biometric variables were significantly affected by subspecies, but only two, tail and wing, by sex; there were no interactions between sex and subspecies, indicating that the effects of sex on body measurements were similar for all subspecies.

For those two parameters (tail and wing lengths) significantly affected by sex, one-way ANOVAs, testing males and females separately, showed that the variables were still significantly affected by subspecies.

For those biometric variables which were significantly affected by subspecies, pairwise comparisons were performed (LSD) to determine the subspecies that could most reliably be distinguished by the relevant measurement. A summary of the results (table 1) reveals the measurements which most usefully divide groups.

Table 1. Summarised results of one-way ANOVA and LSD tests used to distinguish subspecies of Rose-ringed Parakeet *Psittacula krameri* on the basis of five measurements from skins.
* = significantly different; N.S. = non-significant; - = insufficient data for *parvirostris* females.

Measurement		Indian and African specimens	*borealis* and *manillensis*	*krameri* and *parvirostris*
Bill		*	*	N.S.
Body		*	N.S.	*
Toe		N.S.	*	N.S.
Tail	male	N.S.	N.S.	N.S.
	female	-	N.S.	-
Wing	male	*	*	N.S.
	female	-	*	-

Comparison with live specimens

Measurements of six Rose-ringed Parakeets living in the wild in England were obtained from local bird-ringers. A full set of biometrics had been taken of one of these, but for the other five only wing length had been measured. During our study, we also took measurements and descriptions of a further 20 wild individuals captured in west London and of 12 captive specimens. Of the parameters which usefully separate subspecies, body length is likely to be altered by shrinkage in museum specimens, while toe, wing and bill lengths should remain relatively unchanged.

In order to determine which subspecies the live birds most closely resembled, the data for live specimens were plotted against the museum data for those variables which usefully separated subspecies. Fig. 1 suggests that both the wild and the captive parakeets are of Indian origin. Toe and wing lengths indicate that the live individuals are likely to be of the northern race *borealis*. Bill lengths of captives are also similar to those of the northern Indian race, whereas bill lengths of wild-caught birds are closer to those of southern *manillensis*.

Colour characters

Most of the plumage and other colour characters examined varied little, and could not usefully be classified in terms of subspecies.

Bill colour was more variable, but all individuals fell into one of two classes: red-and-black upper and lower mandibles, or red-and-black upper mandible with an entirely black lower mandible. There was no difference in this character between sexes[1]. On the other hand, there were significant differences in the frequency of each bill-colour class among subspecies[2]. The majority of individuals of *parvirostris* and *manillensis*

1. Chi-square; d.f. = 1, $\chi^2 = 0.12$, N.S.
2. Chi-square; d.f.= 3, $\chi^2 = 18.5$, $p < 0.01$.

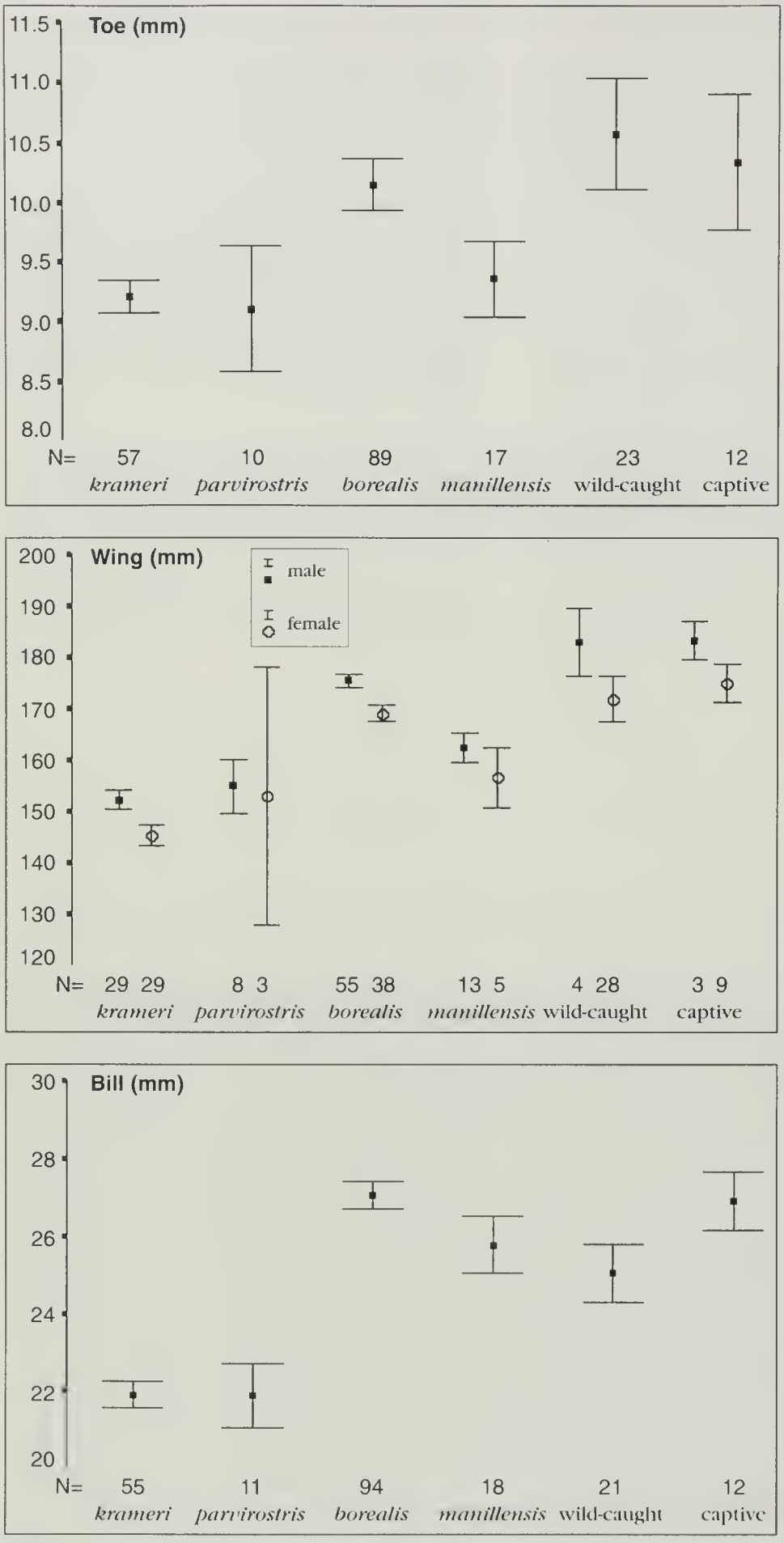


Fig. 1. Mean toe, wing and bill lengths (±95% C.I.) of museum specimens (of each subspecies) and of live specimens (of unknown subspecies) of Rose-ringed Parakeet *Psittacula krameri*.

had a dark lower mandible, while the other two subspecies had a mixture of bill types. A mix of the two bill types was found in the live specimens, which, together with their size, indicates again that at least some are of the subspecies *borealis*.

Conclusions

With the exception of female *parvirostris*, the sample of which is too small to give reliable results, this study of a large collection of Rose-ringed Parakeet skins confirms the differences between Indian and African specimens in wing and bill lengths, as demonstrated previously (Cramp 1985; Forshaw 1989). The high proportion of males in the collection probably reflects a desire among hunters to collect more striking birds, those with a neck-ring. Body length and bill length can be used to distinguish between all four subspecies. Toe lengths of *borealis* are significantly larger than those of all other groups, while tail length differs greatly between sexes, but

not significantly between Indian and African specimens. The two Indian subspecies differ markedly from each other in bill, toe and wing lengths, whereas the two African ones are barely separable on measurements (only their body lengths are significantly different).

Subjective assessments of colour characters are of limited usefulness for distinguishing subspecies of Rose-ringed Parakeet. For example, examination of neck-rings revealed that these varied little: indeed, the character of 'head suffused with blue', ascribed to the subspecies *borealis* (Forshaw 1989), was found in at least one specimen of each of the other three subspecies. In some cases, bill colour may be used to reinforce a subspecies identification, since a large individual with a red-and-black lower mandible is likely to be *borealis* rather than *manillensis*, and a small individual with the same bill type is more likely to be *krameri* than to be *parvirostris*.

The British specimens vary remarkably little, and all are clearly of Indian type. This is surprising in view of the fact that Rose-ringed Parakeets were imported into Britain from both India and West Africa. The apparent absence of any African individuals in the feral west London population may be due to the fact that most African imports occurred in the 1980s (Morgan 1993), some time after Rose-ringed Parakeets had begun to breed regularly in the wild in west London. Indian parakeets have a tendency to produce colour mutations that are highly prized by aviculturists, and many were therefore bred in captivity (Low 1992). They are also perhaps better equipped to survive in a colder climate, as part of their natural distribution extends into mountainous regions; many of the museum specimens originating from India were shot at high altitude, up to 1800 m above sea level.

Wing and toe lengths of the wild and captive Rose-ringed Parakeets indicate that they are of the subspecies *borealis*, but bill lengths of the wild-caught individuals resemble those of *manillensis*. This, coupled with the observation that bill colour is highly variable, suggests that the west London birds may possibly derive from a mixture of *borealis* and *manillensis*. The major imports of Indian parakeets may have come from areas where the two subspecies mix. Examination of old feral specimens from the Netherlands revealed that they, too, had long wing lengths and variable bill colour, and it was suggested that they might have been introduced from the Bombay area, i.e. at around 20°N (Cramp 1985).

Alternatively, over the 30 years during which Rose-ringed Parakeets have been living in Britain, hybridisation between the two Indian subspecies may have occurred, either in captivity or after escape. The extent to which biometrics vary seasonally is not known, and the possibility that, in the analyses, females included an unknown number of juvenile males is not ideal. The toe, wing and bill lengths obtained in the present study, as well as the similarity between captive and wild-caught individuals, do, however, present rather a persuasive argument.

Acknowledgments

The authors would like to thank John Forss, Keith Herber and David Morgan for providing details of parakeet biometrics. We are grateful to the following bird-ringers, who helped by catching and measuring British parakeets: Garry Barker, Andy Baxter, Adrian Blackburn, Richard Denier, Steve Hunter, Phil Prosser and Chris Wright. We also thank Lt Col. & Mrs D. Stenhouse, Mr & Mrs D. Griffin, Mr & Mrs R. J. Riggs and Mrs D. Housely for access to gardens frequented by parakeets. Thanks are also due to staff at the Natural History Museum, Tring, for their friendly assistance. This work was funded by CSL/MAFF.

References

British Ornithologists' Union. 1984. Records Committee: Eleventh Report (December 1983). *Ibis* 126: 440-445.

Cramp, S. (ed.) 1985. *The Birds of the Western Palearctic*. vol. 4. Oxford.

Forshaw, J. J. 1989. *Parrots of the World*. Third edition. Blandford.

Juniper, T., & Parr, M. 1998. *Parrots: a guide to the parrots of the World*. Mountfield.

Inskipp, T. P. 1975. *All Heaven in a Rage*. RSPB, Sandy.

Low, R. 1992. *Parrots: their care and breeding*. Third edition. Blandford.

Morgan, D. H. W. 1993. Feral Rose-ringed Parakeets in Britain. *Brit. Birds* 86: 561-564.

Pithon, J. A., & Dytham, C. 1999. Census of the British Ring-necked Parakeet *Psittacula krameri* population by simultaneous counts of roosts. *Bird Study* 46: 112-115.

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What is the malar?

David Sibley

If you strive to be a better birdwatcher, you have probably spent some time studying the bird-topography diagrams published in books and magazines. A working knowledge of bird topography is essential for describing plumages and for understanding the variation exhibited by birds, but the terminology, particularly in relation to head feathering, is complex and not always easy to understand.

In the 1980s, an international effort was made to standardise the topographical terms, beginning in Britain with the publication of an editorial in *British Birds* in 1981 (*Brit. Birds* 74: 239-242), followed later by Grant & Mullarney (1989). The terms used in those texts were adopted by the American Birding Association's journal *Birding* (Kaufman 1984) and by other subsequent American publications (e.g. Bain *et al.* 1995), and have become well established.

During the course of my work in writing and illustrating a new field guide to the birds of North America, I became increasingly dissatisfied with a couple of points in the standard terminology. After further study, I believe that there is sufficient reason to propose a change in that terminology. In short, the existing terms give names to some variable plumage markings that are seen on many (but not all) bird species, rather than emphasising the better-defined underlying feather groups common to all avian species. In particular, the term 'malar' has been incorrectly applied to one of these plumage markings, and should be transferred to the adjacent feather group. I have used this new terminology in my field guide (Sibley 2000).

One must begin with a basic understanding of feather arrangement. The feathers within each group are very organised, growing in rows and overlapping like roof shingles. Feathers are generally smallest close to the bill, and become gradually larger (longer) farther back on the head. Most feather groups on the head radiate from the base of the bill and can be recognised by their point of origin at the bill. Feather groups are separated by narrow strips of bare skin, by underlying body contours, or by differences in the size and shape of the feathers. The result is faint 'creases' or 'seams' where feather groups meet.

I use the term 'feather group' to designate patches of feathers that are set off from adjacent feathers in some discernible way, although the edges of different groups often blend together. The term 'feather tracts' cannot be used for these contiguous feather groups because, in ornithology, it is employed to refer specifically to long unbroken strips of feather follicles on a bird's body. For example, the 'ventral tract', with several branches, covers the entire underside from the chin to the undertail-coverts. For practical purposes of bird identification, we can subdivide the ventral tract into at least eight different feather groups.

In this short article, I focus on the details of feather arrangement on the lower parts of the head. The current system gives five separate terms for the sides and the underside of the head, implying five discrete parts: ear-coverts (or auriculars), moustachial stripe, submoustachial stripe, malar stripe, and throat. A careful study of feather arrangement, however, reveals only three well-defined feather groups, which I propose calling, respectively, the auriculars, the malar, and the throat. (Many people may prefer the term 'ear-coverts' to auriculars, thereby maintaining consistency with such terms as tail-coverts and wing-coverts.)

The auriculars (ear-coverts) are a well-defined but complex group of feathers below and behind the eye, designed to channel sound into the ear. They blend with the lores below and in front of the eye, but a line extending back from the gape divides the auriculars from the next group of feathers below. The marking referred to in current terminology as the 'moustachial stripe' follows the lower border of the auriculars.

The malar group originates at the base of the lower mandible, below the gape, and extends back along the sides of the lower

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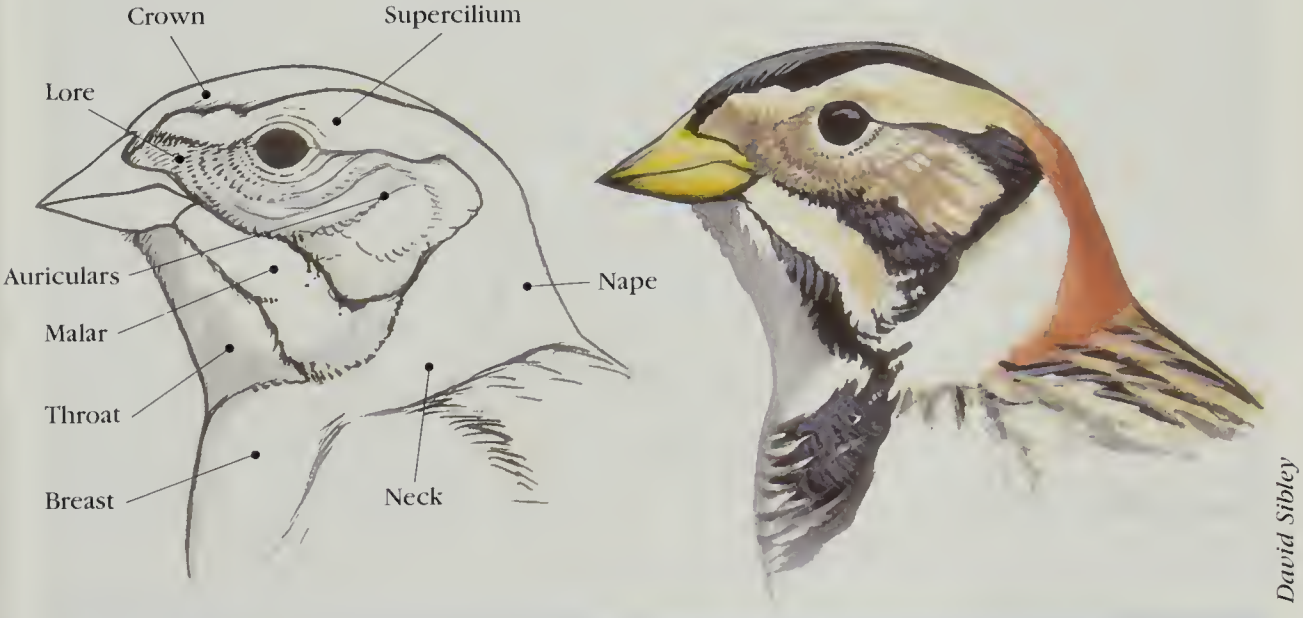
jaw. For most of its length it is distinctly separated from the auriculars and the throat, but it blends with the throat and neck feathers at the rear. This is the group for which the existing terminology has been the most confused. Ornithological texts have traditionally referred to this feather group as the 'malar region' or the 'malar branch of the ventral tract' (e.g. Lucas & Stettenheim 1972; Cramp & Simmons 1977, page 33). It more or less coincides with the common marking currently known as the 'submoustachial stripe', but it does not match the common plumage marking currently referred to as the 'malar stripe' (see below).

The third well-defined feather group on the head is the throat, which covers the underside of the lower jaw. It is clearly separated from the malar group above, although the throat and the malar meet at the back of the jaw and the throat merges with the breast. The throat feather group encompasses the so-called 'malar stripe' of current terminology, which is a dark stripe along the side of the throat that includes few or no true malar feathers.

As fig. 1 shows, these three feather groups are clearly defined, being based on structural features and feather arrangement. They provide a simple and versatile terminology that can be used even on uniformly coloured species such as many of the crows *Corvus*. The well-defined and fixed feather groups can then be used to describe feather markings, or even the placement of randomly scattered feathers (e.g. newly moulted feathers, albino feathers, etc.). With practice in recognising these feather groups, the observer should find that all of the variation in feather markings becomes clear. Moustachial stripes, 'whisker lines', masks, and so on will all seem less intimidating.

The confusion surrounding these terms, and the difficulty of correctly naming plumage markings without fixed reference points, are demonstrated by numerous errors and inconsistencies in recent publications. Even the extraordinary *Collins Bird Guide* (Svensson *et al.* 1999) refers to a contrastingly coloured 'moustache' or 'moustachial stripe' on several species that in fact have a contrastingly coloured 'submoustachial stripe' (malar): see, for example, page 284 (Rüppell's Warbler *Sylvia rueppelli*), page 287 (Subalpine Warbler *S. cantillans*) and page 333 (Eurasian Jay *Garrulus glandarius*). These authors, and others, have presumably been confounded by the difficulty of locating the 'submoustachial stripe' on a bird which lacks a 'moustachial stripe'.

Examples of species with unusual patterns that are largely unappreciated by the current terminology include Rock Bunting *Emberiza cia*, with a dark stripe on the malar feathers (submoustachial) rather than the more common dark stripe on the lower



David Sibley

Fig. 1. Head of breeding-plumaged adult male Lapland Longspur *Calcarius lapponicus*. Left, the major feather groups of the head; right, the actual appearance of the head pattern. Note that the feather patterns mainly follow the contours of the various feather groups.



Mike McKavett



Robin Chittenden

46 & 47. Adult male Cirl Bunting *Emberiza cirlus*, Brittany, France (left), and adult male Rock Bunting *E. cia*, Spain, 1995 (below). The head pattern of each of these species is unusual: the Rock Bunting has a dark stripe on the malar feathers (submoustachial) rather than on the lower auriculars (moustachial), while the Cirl Bunting has a pale stripe across the centre of the auriculars, a marking which has no standard name and can be described only by reference to the feather groups.



David Sibley

Fig. 2. Heads of breeding-plumaged males of Black-headed Bunting *Emberiza melanocephala* (left) and Brambling *Fringilla montifringilla* (right), showing the clear difference in amount of black on the head sides. The malar feather group is mostly yellow on Black-headed Bunting, and all black on Brambling.

auriculars (moustachial); and Cirl Bunting *E. cirlus*, with a pale stripe across the centre of the auriculars, an unusual marking that can be appreciated and described only by understanding the feather arrangement. These are but two of many examples which demonstrate the futility of trying to standardise names for plumage markings.

Clear differences in the head patterns of adult male Brambling *Fringilla montifringilla* and adult male Black-headed Bunting *E. melanocephala* are difficult to describe in the current terminology, and, even though the species are easily distinguished by other characteristics, it is instructive to study those differences. The male Brambling has the throat orange, while the malar and the rest of the head are black (the border between black and orange meets the bill at the bottom of the lower mandible). On the male Black-headed Bunting, the throat and much of the malar are yellow (the border between black and yellow meets the bill at the gape). One could simply substitute 'submoustachial' for 'malar' to maintain the current terminology in these descriptions: for instance, one could say that the male Brambling has the throat orange, while the submoustachial and the rest of the head are black. This would be using the term 'submoustachial' to name a structural feature, while 'moustachial' would be employed only to label an occasional stripe. In this context, 'submoustachial' is the newly coined alternative to the long-established technical term 'malar', and there is certainly no justification for such a change.

Accepting the basic premise that the terminology should be based on feather groups, it remains only to name those feather groups. The auriculars (ear-coverts) and throat are defined consistently in all publications and present no controversy. The narrow feather group along the side of the lower jaw is more problematic. I propose reverting to the well-established ornithological term 'malar' for this group; 'malar' then essentially replaces the term 'submoustachial'. Alternatives could also be considered, such as 'mandibular' or 'lower-jaw' feather group, so as not to compound the confusion surrounding the term 'malar'.

It is most unfortunate that the term 'malar stripe' has recently been applied to a variable plumage marking that does not involve any actual malar feathers. The term 'malar stripe' must be considered obsolete, and this marking is best referred to as a 'lateral throat-stripe' (analogous to a 'lateral crown-stripe').

The term 'moustachial stripe' may still be used for describing a dark or light stripe originating above the gape (near the nostrils) and covering the lower border of the auriculars. Pyle (1997) has suggested the more descriptive term 'subauricular stripe' for this marking. It is important to remember, however, that by any name this stripe is simply a colour pattern and is extremely variable - short/long, narrow/broad, dark/light, etc. There can even be debate over whether

or not an individual bird shows a moustachial stripe; but there will never be debate over whether a bird has auricular feathers.

I propose these changes with all due respect to the efforts of the late Peter Grant and others, whose pioneering work provided a solid foundation and to which I am proposing only a minor amendment. At the same time, I suspect that these terms can never be entirely standardised. They will continue to evolve as more detailed studies are made, and the technical terms will always be confused with more 'comfortable' colloquial terms (e.g. 'moustache').

It is also important to note that the terminology discussed here can be applied easily only to passerines. The structure of non-passerine birds is more variable, and there is a great deal of work to be done to further our understanding of feather arrangements and plumage patterns in all families. In this effort, the most important tool one can have is a well-defined and versatile terminology, and I believe that reverting to the term 'malar' as defined above is an essential step.

References

Bain, M., Beadle, D., Burke, P., & Holder, P. 1995. Bird Topography – Part One. *Birder's Journal*, pp. 194-196.

Cramp, S., & Simmons, K. E. L. (eds.) 1977. *The Birds of the Western Palearctic*. vol. 1. Oxford.

Grant, P., & Mullarney, K. 1989. *The New Approach to Identification*. Privately published.

Kaufman, K. 1984. Terminology and bird topography. *Birding* 16: 191-196.

Lucas, A. M., & Stettenheim, P. R. 1972. *Avian Anatomy – Integument, part 1*. Agriculture Handbook 362. Washington, D.C.

Pyle, P. 1997. *Identification Guide to North American Birds*, part 1. Bolinas, CA.

Sibley, D. 2000. *The North American Bird Guide*. Mountfield.

Svensson, L., Grant, P., Mullarney, K., & Zetterström, D. 1999. *Collins Bird Guide*. London.

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Looking back

Seventy-five years ago:

'SURF-SCOTERS IN NORFOLK. On October 2nd, 1925, wind E. – S.S.W., I saw seven Surf-Scoters (*Oidemia perspicillata*) in a rather choppy sea off Scolt Head. The birds were fairly close inshore, so that the white patch on the nape was distinctly visible on three of them. This is the first record for East Anglia. E.L. TURNER.' (*Brit. Birds* 19: 234, February 1926)

Fifty years ago:

'THE EDITORSHIP OF "BRITISH BIRDS". After the loss of B.W. Tucker there is no longer any one man available with the appropriate depth and breadth of knowledge to succeed him in filling the particular range of functions which have hitherto been concentrated in the Editor of *British Birds*. Moreover, our recent losses of leading ornithologists have called attention to the dangers of omitting to spread the burdens sufficiently widely and of not providing adequately for a succession.' (*Brit. Birds* 44: 72 (inset), February 1951)

Twenty-five years ago:

September and October reports [1975]. 'A quite remarkable influx of American passerines took place which brought many observers to different parts of Britain in the chase to catch up with both the New and Old World species which made the autumn so different from so many preceding ones. Nine individuals of seven species crossed the Atlantic in September and October. First there was a **Rufous-sided Towhee** *Pipilo erythrophthalmus* which was identified at Spurn on 5th September (though it may have been present from 27th August) and which remained until at least the end of November. This was followed by a **Tennessee Warbler** *Vermivora peregrina* on Fair Isle from 6th to 18th, the first for Britain and Ireland if accepted. On 18th a **Bobolink** *Dolichonyx oryzivorus* arrived on Out Skerries (Shetland), and then, incredibly, a second **Tennessee Warbler** was trapped on Fair Isle on 24th. In the last week of September a **Red-eyed Vireo** *Vireo olivaceus* was on Bardsey on 26th and 27th, and a **Black and White Warbler** *Mniotilta varia* stayed on St Mary's from 27th to 30th, while a **Scarlet Tanager** *Piranga olivacea* occupied the same group of islands on Tresco from 27th until 3rd October. In October another **Bobolink** turned up, this one on St Mary's on 9th; and Scilly proved its attraction to American vagrants yet again when a **Blackpoll Warbler** *Dendroica striata* stayed on St Agnes on 19th and 20th, while what was almost certainly the same bird was seen there on 31st and 1st November.' (*Brit. Birds* 69: 73, February 1976)

County, Regional and Bird Observatory Recorders in Britain and Ireland

The main aim of this list is to encourage observers birdwatching away from their home areas to send records to the relevant county recorder. Several counties are divided into areas for recording purposes, but, to save space, and because we believe that it is less confusing, the list generally includes only one name against each county or region. The county and regional names are those adopted by the ornithological organisations concerned, as recommended by the Association of County Recorders and Editors (ACRE). The names and addresses of observatory recorders or wardens appear separately at the end.

We shall be glad to be informed of any errors, omissions or changes of address, which will be noted in our monthly 'News and comment' feature. Furthermore, since many observers now prefer to submit their records by e-mail, it would be helpful if the relevant details, where available, could also be notified to us.

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Please send any corrections or amendments to British Birds, c/o The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY.

Notes

Grey Heron repeatedly plunging into river

At 17.45 hours on 20th March 1995, at East Hyde on the River Lea, 3.2 km north of Batford, Hertfordshire, I observed an immature Grey Heron *Ardea cinerea* perched on a branch of an Alder *Alnus glutinosa*, the only tree along that stretch of the river. Owing to the closeness of the tree foliage, which extended 2 m out over the water, the heron was in an exaggeratedly hunched stance, its head almost touching its feet. Over the following 20 minutes, it made seven head-first dives into the water, during which, because of the river's depth, only half of its upper body became immersed, and on each occasion its legs were left flapping skywards. After each dive, the bedraggled heron came back on to the bank before returning to the same branch. After the seventh unsuccessful attempt, it departed to the north.

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EDITORIAL COMMENT It is not unusual for Grey Herons to plunge head-first into water in this manner, either from flight or from a bankside. The persistence of this individual, however, seems worthy of note. As it was an immature, its lack of success was presumably due to inexperience.

Large brood size and crèche formation of Egyptian Geese

In 1995, while carrying out a survey of breeding wildfowl at Holkham Lake, Norfolk, I noted an unusually large brood of newly hatched Egyptian Geese *Alopochen aegyptiacus*. On 5th June, up to 13 were counted arriving at the lake with their parents, and I was surprised to see that, on the following day, the number of young had increased to 17. Since a different pair had six hatchlings on 3rd June, but both parents disappeared on 5th, the only feasible explanation seems to be that four surviving goslings from that brood had formed a crèche with the original 13. Although such behaviour is frequent among Common Shelducks *Tadorna tadorna*, I had never before noted it among Egyptian Geese in 14 years of regular watching at Holkham Lake. Indeed, I would go so far as to say that Egyptian Geese, when accompanying a recently hatched brood, are usually aggressive and quite intolerant of others of their own or another species, whether adult or young. At no time during my prolonged initial observations of the group of 17 were any other Egyptian Geese seen near them, and the parents seemed quite content in adopting four extra youngsters.

Mortality of Egyptian Geese is usually quite high at Holkham. It was hardly surprising, therefore, to see the family decrease from 17 to 12 on 27th June, and to nine on 28th July, with only six young eventually surviving.

BWP (vol. 1) gives 12 as the largest brood size for this species. During a visit to Kenya, however, I learned from a local tribesman that broods containing as many as 18 goslings have occasionally been noted in the Rift Valley, and in 1995, near Lake Baringo, one pair apparently hatched 15 young in the old nest of a Hamerkop *Scopus umbretta*.

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Female Mallard attacking Grey Heron in defence of young

On 20th April 1996, from a hide at Pulborough Brooks RSPB Reserve, West Sussex, I was watching a Grey Heron *Ardea cinerea* when my friend, the Reverend Peter Myles, asked me what herons eat. I replied that they took fish, voles, frogs, eels *Anguilla*, almost anything. The heron relaxed from its striking position and turned around. When PM asked

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if they also took ducklings, I responded that they did eat waterfowl if they had the chance. No sooner had I said this than the heron sprinted along the water's edge, wings half spread for balance, heading for a group of Mallard *Anas platyrhynchos* ducklings that was by then dashing away. Suddenly, and to the amazement of all present in the hide, the female Mallard launched herself at the heron. Flying at full speed, she cannonballed into the heron's chest, and there was a loud commotion as the duck dropped back into the water. The heron was stopped in its tracks and almost knocked backwards; crest erect and legs up in the air, it was screeching with alarm, before turning tail and hurrying back to its original position. The duck meanwhile, agitated but defiant, ruffled her feathers. With bill agape and a quick glance back, she rounded up the family and departed.

In all my years of birdwatching I had never before seen anything like this. A man in the hide had a video camera, but unfortunately he did not capture the event on film.

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Unusual distraction display by Oystercatcher

In 1995, in The Dukeries, Nottinghamshire, a pair of Oystercatchers *Haematopus ostralegus* bred in a large barley field bordering a lake. On 5th June, I walked along the lakeside close to where I assumed that the unfledged young were hiding. This caused both of the parent birds to fly around noisily in a very agitated state. One flew low over the lake, close to me, with a slow, butterfly-like flight, its tail slightly depressed and its legs dangling; on a few occasions it touched the water surface with its feet, and twice it settled momentarily on the lake. When I returned to the same spot about 30 minutes later, an adult Oystercatcher performed a similar display before settling on the lake, about 20 m from the bank, and swimming diagonally away from me for about 15 seconds, using its partially submerged outstretched wings.

I cannot find any reference to such a distraction display by this species. In their book *Waders: their breeding haunts and watchers* (1986, page 80), D. & M. Nethersole-Thompson stated that British Oystercatchers seldom direct elaborate distraction displays at Man.

R. A. Frost
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Oystercatcher incubating egg and rearing young of Herring Gull

Since the 1970s, Oystercatchers *Haematopus ostralegus* have nested on the flat rooftop of Elgin Academy, Morayshire. In recent years, Herring Gulls *Larus argentatus* have also been present during the breeding season, but without nesting. Following the replacement of the roof-surface gravel with asphalt, in 1992, shallow wooden boxes containing gravel were placed on the roof and were successfully used by Oystercatchers as nestboxes.

On 16th May 1995, a Herring Gull was found to have taken over the nestbox of an Oystercatcher pair which had incubated three eggs for at least two weeks. These eggs had gone, presumably eaten by the gulls, and in their place was a solitary Herring Gull egg, in a nest which had become built up with grass and items of playground litter. A single gull was at the nest, calling defensively, while the pair of Oystercatchers sat quietly, 25 m away.

Two days later, an Oystercatcher was incubating the gull's egg and the Herring Gulls, presumably the same pair, were building a new nest about 80 m away. Strangely enough, this new site, not in a nestbox, was close to another Oystercatcher nest, from which all three chicks had recently fledged successfully, no predation having taken place.

During the ensuing period in which the Oystercatcher incubated the Herring Gull's egg, all the nest material collected by the gulls was gradually removed, returning the nestbox contents to bare gravel. A Herring Gull chick was first seen on 14th June, suggesting an

incubation period of 27 days. Both adult waders supplied earthworms (Lumbricidae) as food and provided the usual defence against marauding crows (Corvidae). The chick called when hungry and ran to meet returning adults, pecking at each one's bill to remove worms, or picking dropped worms from the roof surface.

By 30th June, the gull chick had flown from the roof to the playing field, and my observations became less regular. Wing-flapping and attempts to fly were noted on 24th July, by which time the chick was clearly larger than its foster parents. The final observation was on 27th July, when both Oystercatchers were in attendance, bringing food from outwith the playing field, as warm weather had dried out much of the field's surface. On the following day, all three birds had gone. Meanwhile, the two parent Herring Gulls reared a single chick from their second nest on the Academy roof.

Despite the Oystercatchers' apparent success in rearing the gull to the flying stage, their subsequent foraging behaviour may not have provided enough food for the juvenile gull to achieve independence.

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Woodcock preening mud into its plumage

On 5th June 1995, while driving along a woodland ride in The Dukeries, Nottinghamshire, I noticed two Woodcocks *Scolopax rusticola* and stopped my car about 15 m from them. One, the darker and less rufous of the two, stood at the edge of the ride, occasionally preening, and at times eating small worms taken from the grass verge. The other stood by a large puddle in the middle of the ride, preening vigorously. On at least 30 occasions during the next 20 minutes, the latter, using the tip of its bill, picked up mud from the edge of the puddle and preened this into the feathers of its back and wings; twice it wiped mud from the side of its bill with its foot. After 20 minutes, the two Woodcocks flew off together.

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Duetting by Blue Tits

On 4th April 1990, on Southampton Common, Hampshire, I heard the spirited 'hi tatty, hi tatty' calls of a Blue Tit *Parus caeruleus* coming from birches *Betula* and oaks *Quercus* 25-30 m ahead of me. Slowly approaching the caller, I was surprised to find that, in fact, the sounds came from both sides of the path and there were two individuals involved. The one on my right called 'hi' and the one on my left added 'tatty'. The duet was performed with the utmost precision, and I could detect no gap between the sounds. I might add that I am a professional musician.

This performance was repeated for varying lengths of time, the right-hand tit always calling 'hi' and the other adding 'tatty', and always in duple time. Suddenly, and with no warning so far as I could judge, the pattern changed: the first bird called 'hi hi', while the second replied 'tatty' as before, but the pattern was now in triple time. The change-over was highly synchronised, and again the duet was performed with precision, with no detectable time gap between the calls of the participants.

The tits were clearly in my sight throughout these performances. Eventually, they flew away in opposite directions to each other, one to my right and one to my left.

I can find no reference in the literature that I have consulted (e.g. *BWP*, vol. 7) to Blue Tits duetting.

John R. Simms
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EDITORIAL COMMENT The members of the Behaviour Notes Panel agreed that this is an amazing observation. So far as we are aware, there are no other documented records of duetting by this species. We should be most interested to hear of any further such instances of Blue Tits duetting, so long as these are fully confirmed by precise observation of the individuals involved.

Letters

The alleged influx of wild Ruddy Shelducks in 1994

Although the concluding remarks of Vinicombe & Harrop's paper (*Brit. Birds* 92: 225-255) were somewhat contradictory, it is now received wisdom that an influx of wild Ruddy Shelducks *Tadorna ferruginea* occurred in northern and southwestern Britain in 1994, part of a much larger invasion into Fennoscandia. I believe that no such conclusion can be drawn from the evidence presented.

The total number of Ruddy Shelducks recorded in Britain and Ireland was in fact lower in 1994 than in 1991, 1992 or 1993, and only slightly higher than the total for 1988 (*Brit. Birds* 92: 227, fig. 2). This is hardly evidence for an influx into these islands in 1994, and the figures show, if anything, a net loss from Britain and Ireland of perhaps half a dozen birds. The authors admit that 'for Britain and Ireland as a whole, 1994 was unexceptional by recent standards' (92: 227). In northern and southwestern Britain, numbers were indeed somewhat higher in 1994 than in any other year in the 1986-94 period (92: 228, figs. 3 & 4); the numbers in northern Britain (19, one of which was colour-ringed) and in southwestern Britain (18) in 1994 were, however, only slightly greater than the 10-15 recorded annually in the previous three years in each of those regions. To describe this rather modest increase as an 'invasion' is pure hyperbole. Rather more tellingly, what is not discussed in the paper is the fact that the numbers of Ruddy Shelducks in east and southeast England were *lower* in 1994 than in all but one year (1989) in the 1987-93 period, and less than half the total recorded in 1993 (92: 228, fig. 5). Moreover, no Ruddy Shelducks were noted in 1994 in Ireland, where seven had been recorded in 1993 (92: 228, fig. 6).

The simplest hypothesis to account for these figures is that escaped Ruddy Shelducks from east and southeast England, and possibly Ireland, moved to north and southwest Britain in 1994, forming small parties where they found favourable habitat. Significantly, the previous year in which such low numbers were recorded in east and southeast England (1989) also coincided with a small increase in numbers in northern and southwestern Britain (92: 228, figs. 3-5). For some reason, Vinicombe & Harrop did not consider this possibility and stated, rather lamely, that 'little attempt was made to correlate movements between regions, unless there were obvious reasons for so doing' (92: 227). A report of four possible Ruddy Shelducks seen arriving from far out to sea in Suffolk in July 1994 (*Brit. Birds* 93: 149) is intriguing, but frustratingly inconclusive, direct evidence of immigration from abroad.

I am not convinced that the occurrence of flocks or of 'wild behaviour' can be used as evidence of wild origin. Small flocks occur in Belgium, France and Spain, but all are believed to be escaped or feral-bred birds. That there should have been several flocks of Ruddy Shelducks in Britain in 1994 is unsurprising when such large numbers had escaped – for example, 18 from Ramsbury, Wiltshire, in 1988 – and should not be considered as *prima facie* evidence of vagrancy. The whole question of whether timidness equals wildness needs to be looked at afresh, but, if being confiding does not disqualify some species from being wild (e.g. Ivory Gull *Pagophila eburnea*), then the opposite may also be true, that being shy does not disqualify a species from being an escape.

That an influx of Ruddy Shelducks into Fennoscandia took place in 1994 is not in dispute, of course, but no evidence is presented which proves conclusively that any of these birds were wild. A small feral population has been established in central Europe since the late 1980s, and both escaped and feral-bred birds are believed to wander freely within Europe. For those central European countries south of Fennoscandia where no influx was observed in 1994, no accurate counts are available which would allow us to compare numbers in different years. There may have been an exodus from Germany or Austria in 1994, but we have no way of knowing from the data presented. What does appear certain is that a large feral population at the Askaniya Nova Reserve, in Ukraine, experienced a loss of perhaps 500 individuals in 1994, owing to a severe drought. The single recovery of a genuinely wild Ruddy Shelduck, ringed in Kirghizstan in 1973 and found dead in Poland in late October 1978, is undeniable proof that vagrancy does occur. In a dissenting conclusion

to the paper, however, Harrop noted that 'The pattern of records in northern Europe does not correlate well with the Polish recovery, and differs from known movements of wild birds in the eastern Mediterranean and elsewhere', while losses from the feral Ukrainian population 'could account for the whole invasion [into Fennoscandia]' (92: 254).

In summary, there was no net increase of Ruddy Shelducks in Britain and Ireland in 1994 compared with previous years which might indicate a substantial influx from continental Europe. The occurrence of flocks and of unapproachable birds is not sufficient grounds for claiming that these ducks were of wild origin. Even if we admit that a few Ruddy Shelducks can reach Britain from Europe – and I stress that there is no firm evidence for this – such birds are likely to be escapes or feral-bred individuals from central Europe or farther east. In any case, being able to decide whether even undoubted immigrants were feral-bred (Category C), as distinct from escapes (Category D), is surely a forlorn hope. I believe that the evidence merely shows that, throughout Europe, feral-bred and escaped Ruddy Shelducks move north and west in the summer, presumably to moult, and that, in drought years, they may move much farther than normal. The idea that some of the Ruddy Shelducks now wandering Britain are of wild origin is, in my opinion, without foundation.

Andrew Duff
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Andrew Duff raises a number of interesting points. As he acknowledges, we were not entirely in agreement about the conclusions which could safely be drawn from the data which we presented, and there is no reason why it should have become 'received wisdom' that an influx of wild Ruddy Shelducks *Tadorna ferruginea* occurred in northern and southwestern Britain in 1994.

It is clear that an exceptional invasion into Fennoscandia took place in 1994, but Andrew Duff's hypothesis to account for records in Britain in that year is not entirely plausible, since he does not explain *why* disparate populations of feral or escaped birds should have spontaneously erupted. Ongoing research has not confirmed that the birds involved are likely to have originated from the feral population in Askaniya Nova, Ukraine. Since 1987, Ruddy Shelducks in Askaniya Nova have been marked with plastic colour rings: of about 1,500 individuals ringed between 1978 and 1998, 335 have been observed again within the reserve; other recoveries come from the Khersonskaya oblast, the Crimea, the Krasnodar Kray, Abkhazija and Azerbaijan, all to the south or southeast, and from Kalmykia to the northeast (Zubko *et al.* 1998; A. Popovkina *in litt.*). While the colour-ringed birds in Hungary in 1994 (*Brit. Birds* 92: 238) may have originated from this population, it would seem unlikely that the colour-ringed individual on the Wirral did so.

There is evidence that Ruddy Shelducks have increased and expanded their range in southern Russia and Kazakhstan in recent years and, on 24th May 1999, a Ruddy Shelduck was observed in northeast Russia at the Kolokolkova Bay, south of Novaya Zemlya (Mineev & Mineev 1999), lending weight to the theory that birds involved in exceptional influxes into northwestern Europe may be erupting or overshooting from Kazakhstan or even Central Asia.

It now seems likely that the influx into Fennoscandia in 1994 largely involved wild Ruddy Shelducks. Whether or not any of these occurred in Britain remains uncertain, but, in view of the flocks in the Wirral, northeast England and Cornwall (*Brit. Birds* 92: 235-236), it appears quite likely that some wild birds did occur here and relevant records are being assessed by the BOURC. As occurrences since 1994 have not been analysed, comment on the provenance of Ruddy Shelducks currently being seen in Britain is necessarily speculative, but it seems probable that, in 'normal' years, most, if not all, are of escaped or feral origin.

References

Mineev, Y. N., & Mineev, O. Y. 1999. New Observations of Anseriforms in the Northeast of Russia. *Casarca* 5: 338.

Zubko, V. N., Popovkina, A. B., Gavrilenko, V. S., & Semenov, N. N. 1998. Population of the Ruddy Shelduck in Askania-Nova: History and Current Status. *Casarca* 4: 242-243.

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News and comment

Compiled by Bob Scott and Wendy Dickson

Mute Swan Census 2001

A national census of Mute Swans *Cygnus olor* will take place in spring 2001, repeating the last one, conducted in 1990. Mute Swans are widespread during the breeding season on all manner of wetlands, including small lakes and, particularly, rivers, habitats little visited by waterbird surveys.

This census will be organised by WWT in conjunction with the Swan Study Group, Scottish Ornithologist's Club, BTO and various other bodies and individuals interested in this especially popular species.

The survey, in essence, is very straightforward and involves simply counting all swans and noting whether or not the birds are breeding (e.g. with a nest or a brood of cygnets). Particular 10-km squares of the national grid are being preselected for survey, and observers will be asked to visit all suitable Mute Swan habitat in these squares during April or May. The aim is to cover the most densely populated regions completely, with less intensive coverage of other areas.

Although Mute Swans are large and conspicuous, the survey may involve a fair deal of footwork in areas with networks of small rivers and ponds, particularly given the spread of the population since the late 1980s. Thus, in addition to the existing volunteer networks, it is hoped that others may provide help to ensure the extensive coverage required.

For further details on the survey, please contact Peter Cranswick, WWT Slimbridge, Gloucester GL2 7BT; tel. 01453 891931; e-mail Peter.Cranswick@wwt.org.uk

Christmas puzzle: the solution

Sponsored by Vinicola Hidalgo SA



1. Black Grouse (Bird that engages in rookooing.)
2. Dipper (One who missed seeing a water bird without webbed feet?)
3. EURING (Band of like-minded groups that have co-operated since first meeting in Paris in 1963.)
4. Grebe or Great Crested Grebe (Original wearer of a tippet.)
5. Ivory (product of projection linked with the fossil genus *Aepyornis* – elephant-birds – and the frost-loving bird – generic name of Ivory Gull, *Pagophila*, means frost-lover.)
6. Ibis (Could be holy – Sacred – or Coot-like – Bald.)
7. Leap-frog migration (Term that describes the migration of the northern population of a species to winter quarters farther south than those of the southern breeding population of the same species.)
8. *montanus* (What Willow Tit and Tree Sparrow have in common.)
9. Ruff (At a lek, he dances on a hill.)
10. Sandgrouse (Water-carriers.)
11. Falcon (The ten initial letters of the first ten answers – BDEGIILMRS – can be rearranged to spell SLIMBRIDGE, where Sir Peter Scott created The Wildfowl & Wetlands Trust. His father was, of course, Robert Falcon Scott of the Antarctic.)

The three winners, each of whom will receive a case of La Gitana sherry, courtesy of our Christmas Puzzle sponsor, *Vinicola Hidalgo SA*, were J. K. B. Illingworth (St Neots, Cambridgeshire), Norman McCanch (Canterbury, Kent) and B. S. Preston (Harrogate, North Yorkshire).

More news on 'Branta'

We reported recently (*Brit. Birds* 92: 549) that, following the sad death of David Simpson, the bird-tour company Branta Travel was for sale. We now understand that a marketing agreement has been reached between Branta and Honeyguide Wildlife Holidays, and that all future mailings will be handled by Honeyguide. Since its formation ten years ago, Honeyguide has raised over £20,000 for bird conservation projects in Europe, channelling its funding through the national BirdLife partners. Among the top donations have been almost £6,000 to Sociedad Española de Ornitologia (Spain) and £5,000 to Ligue pour la Protection des Oiseaux (France). Further details from Honeyguide, 36 Thunder Lane, Norwich NR7 0PX.

Neaps for Linties

'Lintie' is the Shetland name for the Twite *Carduelis flavirostris*, Shetland's only resident finch (though numbers are probably augmented by passage birds in autumn, of which a few may overwinter). Twites are thought to have been declining in the islands for a number of years. An innovative scheme known as 'Neaps for Linties' was introduced in 2000, whereby the RSPB and Shetland Wildlife Fund made payments to farmers to grow turnips (neaps) to provide cover and weed seeds for wintering Twites. Operated by the Shetland Crofting, Farming and Wildlife Advisory Group, the scheme resulted in payments to 17 crofters and supported the production of 4 hectares of existing neaps and 19 hectares of new neaps, representing a 44% increase in the crop available for Twites.

The Wildlife Veterinary Investigation Centre

Unlike many countries, the United Kingdom does not have a Department of Wildlife or any other organisation with the remit to investigate health problems in wild animals. The Centre for Ecology and Hydrology (formerly the Institute of Terrestrial Ecology) monitors levels of certain pesticides, and the Environment Agency also carries out environmental monitoring. However, neither of these organisations, nor any of the conservation societies, employs a wildlife pathologist. In the past, most of the work on wildlife pathology has been carried out by a few motivated individuals in MAFF Veterinary Investigation Centres. In recent years, however, this work has virtually ceased.

Vic Simpson has recently retired from MAFF and is setting up the Wildlife Veterinary Investigation Centre in Cornwall to study wildlife health problems. The Centre will operate as part of the Cornwall Wildlife Trust and thus benefit from the Trust's charitable status. Key objectives of the new Centre will include carrying out detailed post-mortem examinations on all suitable wildlife specimens, irrespective of the apparent cause of death, and monitoring evidence of disease; and the aim is also to build up a database of information on the anatomy, physiology, organ weights, etc. of animals. Such data do not exist for most wild species. Vic Simpson can be contacted at Jollys Bottom Farm, Station Road, Chacewater, Truro, Cornwall TR4 9AD (email: wildlife.vic@rmplc.co.uk).

Obituary: Charles Metherell James (1914-2000)

With the death of Charles James of Sussex, the British conservation movement has lost a stalwart. A reserved man of Victorian upbringing, he had many interests. He rowed for his school, Emmanuel, and he climbed in the Lake District; while in Sussex, he sailed his dinghy, he fished offshore (as he hated eating fish, they were returned to the sea) and, in the 1950s, he captained a team in the Brighton and District Rifle League which won many trophies.

It is, however, for his lifelong interest in and commitment to natural history, particularly ornithology, to which he contributed tirelessly, that he will be remembered. In the early days, a mere handful of people watched birds, and long-term contacts were formed while seawatching at Selsey Bill. With very little in the way of field guides to help, seawatching required accurate and methodical observation, both in the field and in the recorder's reports that he frequently drew up, skills which he never lost. I once lent him a book on the Lizard Peninsula in Cornwall, an area we both knew well. He read it in one sitting, and said 'Excellent' as he handed it back; 'There were no typing errors.' His contributions to the *Sussex Bird Reports* date from 1946 and continued annually until 2000.

Charles became an active member of the Sussex Ornithological Society when it was formed in 1962, serving both on the Council and as County Recorder for a period. He was among the first, forty years ago, to join the Sussex Wildlife Trust, then known as the Sussex Naturalists' Trust, the name which he still preferred to use.

After discharge from the Navy, he subscribed and contributed to *British Birds* from 1945 until his death. Throughout those 55 years, the *BB* subscription department wrongly recorded Charles's forename initial as 'G', an error which will now be rectified, ironically, as his six-year-old grandson, Gareth, will take over the subscription. Charles married Beryl relatively late in life. She not only shared his interest in the natural world, but also took, and continues to take, an active role, including 20 years' continuous involvement with the local section of the Sussex Wildlife Trust in Selsey. Their two sons, Richard and Paul, spent their youth on outings, such as those made to record species in the Mens SSSI, near Petworth, or brisk walks along the sea wall at Pagham Harbour. Something rubbed off. Paul James edited the *Birds of Sussex*, published by SOS in 1996 and regarded by many as the gold standard among county bird books.

With his reserved nature, Charles was not a man whom I got to know well, but he was always courteous and, as we chatted, he would ensure that I learned what was about. He also lent me any of his bird books when I was off travelling, a generous gesture not readily made by all. His sherries were legendary, and one Christmas I was lucky to make it back to the house. He was a gentleman and a man of principle, whose voluntary contribution, together with that of his family, helped to create the bedrock on which UK conservation depends.

Until June 2000, Charles was still in the field, birdwatching, virtually daily. Rainy days were kept for stamp-collecting and reading up on history and archaeology. Since he had not been ill for most of his life, it was a shock to his system when he became bedridden. Birdwatching, however, was in his blood. On asking for his glasses in his hospital bed, he was handed his reading glasses by Beryl. 'Not those! My binoculars! There's something I must look at.'

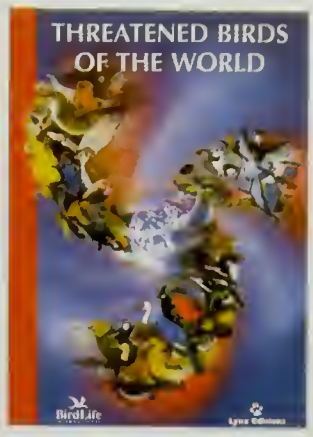
I thank Beryl for her contribution to this brief appreciation.

(Contributed by Dr Jill Sutcliffe, Botanical Manager, English Nature)

Reviews

THREATENED BIRDS OF THE WORLD

By BirdLife International. Lynx Edicions and BirdLife International, Barcelona and Cambridge, 2000. 852 pages; maps, colour illustrations. ISBN 0 946888 39 6. £70.00.



Many *BB* readers travel the World to indulge their passion for birds, yet future generations will be denied the same opportunities if habitat destruction and degradation continue unabated. This volume, three years in the making and involving contributions from nearly 1,000 individuals, makes alarming reading. Nearly 1,200 species, one-eighth of the World's avifauna, are globally threatened and, of these, 182 are on the brink of extinction. Birds are key environmental indicators, and these statistics are a sad reflection of the assault on global biodiversity by the human species.

Introductory chapters cover biodiversity hotspots (not surprisingly, Brazil and Indonesia top the list), identify the habitats most under threat, and also sound a more optimistic note by discussing possible solutions. The main part of the book considers the threatened species themselves. These are rated as critically endangered, endangered, or vulnerable (a useful explanation as to how categorisation was determined forms another introductory chapter). Having toured India in 1980, I was amazed to see that the population of White-rumped Vultures *Gyps bengalensis* (a bird I encountered almost daily, in flocks of up to 400) may now be as low as 2,500 individuals – a graphic illustration of just how rapidly a species' status can change.

Two to a page, each species account follows a standard format. This comprises a small colour painting depicting it, an identification summary, and information on range, population, ecology, threats and conservation. What sets this book apart, however, is that it identifies a series of targets for each species. Whilst many of these require the establishment of protected areas, or detailed research projects, there are clear opportunities for birders to make important contributions. For example, over half the species in a random selection of accounts that I flicked through require site surveys, visits to unexplored areas, or recordings of vocalisations.

In addition to the wealth of information contained within the book, an excellent design and good use of colour combine to make it extremely attractive. Weighing in at four kilos and measuring five centimetres thick, it certainly represents value for money, although I wonder just how well the binding will stand up to repeated use.

Lynx and BirdLife International are to be congratulated on producing a superb book, arguably the most important ornithological work of the new Millennium so far. Influencing decision-makers and mobilising the resources necessary to undertake the actions identified to safeguard the World's avian diversity represent far greater challenges, but by buying this book each of us can at least make a small contribution to these goals. Surely anyone with more than a passing interest in the World's birds has a responsibility to do so.

Paul Harvey

IMPORTANT BIRD AREAS IN EUROPE. PRIORITY SITES FOR CONSERVATION

Edited by M. F. Heath & M. I. Evans. BirdLife Conservation Series 8, 2000. 1,666 pages A4-sized. ISBN 0-946888-36-1. 2 Volumes. Paperback, £75.00.

In this hefty tome (5.3 kg), 3,619 Important Bird Areas (IBAs) are described, 1,175 more than in the forerunner (Tucker & Heath 1989). In total, they cover 7% of Europe's land surface. IBAs, selected on the basis of their importance for the conservation of birds, are the recommendations of BirdLife International and its national partners for the network of sites to meet Article 4 of the Birds Directive of the EU and other European and international legislation (such as the Ramsar, Bern and Bonn Conventions).

One intention of this inventory is to give support for authorities of the EU to build up the network of conservation sites required under the Birds Directive (Special Protection Areas: SPAs), and the Natura 2000 network of the Fauna-Flora-Habitat Directive. Additional objectives are, among others, to identify and promote awareness of the most important sites and to provide a tool for planning and management, through presentation of key information on birds, habitats, land uses, threats, legal protection, and conservation status.

It is of special concern that the conservation status of most sites is highly unsatisfactory; indeed, 93% of the IBAs listed in this work must be considered

threatened. Within 95% of sites, land-use practices have been recorded which show that agricultural intensification and/or expansion is the most serious threat. Of all IBAs, 40% are without any protection by national laws and 60% lack protection by international laws.

BirdLife International has done a fantastic job with this work, which is of the highest value for conservation in general.

Goetz Rheinwald

A PHOTOGRAPHIC GUIDE TO BIRDS OF JAVA, SUMATRA AND BALI

By Tony Tilford; photographs by Alain Compost.
136 pages; 236 species illustrated. ISBN 1-85368-730-8.

A PHOTOGRAPHIC GUIDE TO BIRDS OF ISRAEL AND THE MIDDLE EAST

By David M. Cottridge & Richard Porter.
144 pages; 252 species illustrated. ISBN 1-85974-508-3.

A PHOTOGRAPHIC GUIDE TO BIRDS OF THE WEST INDIES

By G. Michael Flieg & Allan Sander.
144 pages; 251 species illustrated. ISBN 1-85974-509-1.

A PHOTOGRAPHIC GUIDE TO BIRDS OF THE PHILIPPINES

By Tim Fisher & Nigel Hicks.
144 pages; 215 species illustrated. ISBN 1-85974-510-5.

A PHOTOGRAPHIC GUIDE TO BIRDS OF SRI LANKA

By Gehan De Silva Wijeyeratne, Deepal Warakagoda & T. S. U. De Zylva.
144 pages; 252 species illustrated. ISBN 1-85974-511-3.

All published by New Holland, London, 2000.
Paperback, each £7.99.

Five more titles in New Holland's pocket-sized photographic guides to the birds of various countries were published in 2000. The format for each remains the same as that of earlier publications in the series, starting with a useful introduction to the area covered (varying from 10 to 19 pages in the above titles) and usually including background information, a summary of sites to visit, a map, and a list of useful contacts. The bulk of each book is taken up with one colour photograph of each species accompanied by a paragraph of text that usually covers status, distribution, habitat, habits and identification information. The guides to the less well-documented areas include many photographs of species that are not readily available elsewhere, making them very useful references.

A weakness of this series is that each guide can cover only around 250 species, which is fine for areas with restricted avifaunas, but inadequate for those with many hundreds of species. In the latter cases, choosing which birds to include must have been difficult for the authors, although for some titles, at least, this has probably been dictated largely by the availability of photographs.

The guides are well written by appropriate authors with suitable expertise in each region, all of whom have done an excellent job within the constraints of the series' format. The end results are neat little paperback guides that take up almost no luggage space and which are well worth taking on trips, to be used either on their own (if no other portable guide exists) or as a supplement to a 'traditional' field guide illustrated by paintings.

For future titles in the series to be made even more useful, I would suggest the following. Authors should be encouraged to try to include as many of the local specialities as possible, rather than species with wide world ranges that are probably already familiar to most users of the guide (for example, a photograph of Little Grebe *Tachybaptus ruficollis* is included in all three of the Asian titles listed above). When possible, the month in which the photograph was taken should be included, as well as the location (or, at least, the country); and, if the bird was photographed in captivity, this should be stated. These extra notes, if included in small print alongside the photograph (as are the names of photographers), would require no extra space.

Finally, and as often seems to be the case with photographic guides, there are a few instances of misidentifications. I spotted the following (not necessarily an exhaustive list): the photographs of reef egrets in the Philippines guide have been transposed (but why Western Reef Egret *Egretta gularis* has been included at all is a mystery, as it does not occur in the Philippines and is not mentioned in the text); the bird labelled as Common Redshank *Tringa totanus* in the Philippines guide is a Spotted Redshank *T. erythropus*; the Green Sandpiper *T. ochropus* in the Sri Lanka guide is, in fact, a Wood Sandpiper *T. glareola*; and the immature Little Blue Heron *Hydranassa caerulea* in the West Indies guide looks to me more like a Snowy Egret *Egretta thula*.

Despite these minor criticisms, the guides can be recommended as very useful additional literature for birders visiting the relevant areas, especially when modern field guides are lacking.

David Fisher

Monthly Marathon

December's photograph (plate 364 in volume 93, repeated here as plate 48) is obviously of a wader/shorebird (depending on which side of the Atlantic you come from) and, judging by its proportions, and by its size in relation to the vegetation in the background, it must be one of the smaller calidrine species. Faced with a photo like this, where the identity of the bird may not be immediately apparent, it often helps to try to establish the bird's age and, in so doing, the approximate time of year at which it was photographed. This is not so difficult as it may seem, since most calidrines follow a standard moult regime and sequence of plumages. The key, usually, is to establish how many generations of feathers there are, what type of feathers these are (i.e. juvenile, non-breeding, or breeding) and, if possible, their condition. The distinctly pointed, very narrowly pale-edged and faded-looking wing-coverts and tertials are old and in worn condition; and there appear to be two generations of scapulars, mainly large, comparatively fresh-looking, essentially 'grey' feathers interspersed with a scatter of darker feathers (the latter most obvious along the lowest tract). From this combination, we can deduce that the mystery wader is an adult in transition from breeding to non-breeding plumage, and that the photograph was therefore taken in the late-summer/early-autumn period.



48. White-rumped Sandpiper *Calidris fuscicollis*.

Since there seems no reason to doubt that the bird really does have dark legs (i.e. that their darkness is not due to adhering mud), we have reasonable grounds for eliminating the three pale-legged stints: Temminck's *Calidris temminckii* and Long-toed Stints *C. subminuta* and Least Sandpiper *C. minutilla*. In case there was any uncertainty about determining the bird's size against that of the plant in the background, leg colour also excludes the larger *Calidris* species, such as Red Knot *C. canutus*, Pectoral Sandpiper *C. melanotos* and Sharp-tailed Sandpiper *C. acuminata*, or an unlikely out-of-habitat Purple Sandpiper *C. maritima*. Neither the legs nor the bill are long enough for a Curlew Sandpiper *C. ferruginea*, leaving the four dark-legged stints, Sanderling *C. alba*, White-rumped Sandpiper *C. fuscicollis*, Baird's Sandpiper *C. bairdii*, Dunlin *C. alpina* and Broad-billed Sandpiper *Limicola falcinellus* in the frame. 'Is that all?' I hear some of you say. Others will, I expect, have taken one look at the shape of the bird and immediately narrowed down the choice to just one or two of these species. Even so, if they are actually taking part in the competition, they may have considered all the possibilities, at least briefly, just in case.

Transitionally plumaged Sanderlings can be confusing, but they would show paler grey



49. 'Monthly Marathon'. Photo no. 175. Twenty-third stage in eleventh 'Marathon'. Identify the species. Read the rules (see page 55), then send in your answer *on a postcard* to Monthly Marathon, c/o The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY, *to arrive by 5th April 2001.*

areas in the scapulars, would have small, light spots near the tips of some of the larger scapulars, inner wing-coverts and tertials, and would, of course, lack the tiny hind-toe just visible on the left foot in this photo. Eliminating Little Stint *C. minuta*, Red-necked Stint *C. ruficollis*, Semipalmated Sandpiper *C. pusilla* and Western Sandpiper *C. mauri* is difficult on plumage alone, and it is necessary to look at structure for additional clues: the noticeably long primary projection and the rather dark grey tone of the fresh 'winter' scapulars (as well as the broad blackish shaft-streaks) hardly suit any of them, but some Little Stints could come close; most, however, would show at least a hint of 'warmth' in the wing-coverts, while Western and Semipalmated would never exhibit such a long projection of the primaries beyond the longest tertials. The long primary projection is also a significant pointer away from either Dunlin or Broad-billed, and I would expect most of the former in this transitional plumage to show brighter rufous in the retained lower scapulars, as well as, perhaps, some dark markings on the underparts.

With just two species remaining, Baird's and White-rumped, the choice becomes a little easier. A Baird's in this plumage would show a much more sandy-buff colour to the upperparts. In all respects, the mystery bird matches well the appearance of White-rumped Sandpiper in transitional plumage. Confirmation of the identification is provided by the hint of yellow-orange at the base of the lower mandible (also ruling out an exceptionally dull transitional Little Stint) and a faint suggestion that the flanks may actually be streaked.

Again, this did not prove too difficult: the majority, 79%, correctly identified the White-rumped Sandpiper, with 7% opting for Broad-billed Sandpiper, and the remainder suggesting Western Sandpiper, Little Stint, Baird's Sandpiper or Curlew Sandpiper.

Only one of the leading contenders failed to make a correct identification, so that the position now is: Christer Kalenius on nine-in-a-row, Palle Jensen, Peter Lansdown, Andy Mears, Jakob Sunesen, Peter Sunesen and Steve Votier all on eight, Roy Hargreaves, Jon Holt and Richard Patient on seven, and Andy Rhodes on six.

As stated last month, at least 13-in-a-row are needed to win the Sunbird holiday.

Killian Mullarney

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Rarities Committee news

New BBRC member

The BBRC is pleased to announce that, following a recent ballot of county records committees and bird-observatory wardens organised by ACRE and BBRC, Brian Small from Suffolk has been appointed as the new member of the Committee, commencing his duties on 1st April 2001. We are delighted to welcome him on to the Committee, and we are sure that he will prove to be a great acquisition for us.

This was the first election since 1997, and the result was the closest for many years, with Brian attracting 117 votes while Steve Votier gained 101. There were, in fact, several abstentions among the county records committees, as they were unable to choose between two such high-quality candidates, and we received suggestions that we should appoint both. Unfortunately, the revised constitution of BBRC does not allow for this. Steve should not, however, be downhearted, as both the nomination itself and the degree of support which he received show that he is held in very high esteem. Moreover, two current members of the Committee were unsuccessful in their first election, but were subsequently appointed. We have little doubt that Steve will serve on BBRC in the near future.

Brian takes the place of Andy Stoddart, who retires as the longest-serving member of the Committee. Andy has been with us since 1993, and he will now be able to birdwatch at Blakeney Point safe in the knowledge that he no longer has an in-tray full of rarity descriptions to scrutinise. We wish him a happy retirement from this task, and give him advance notice that we shall undoubtedly call upon his advice in the assessment of some of the groups in which he has particular expertise.

We are indebted to Judith Smith for her help in running this election.

Colin Bradshaw

The British Birds Rarities Committee is sponsored by Carl Zeiss Ltd.

Recent reports

Compiled by Barry Nightingale and Anthony McGeehan

This summary of unchecked reports covers the period 2nd January to mid February 2001.

Cattle Egret *Bubulcus ibis* Coldwaltham (West Sussex), 27th January to 11th February. **Red-breasted Goose** *Branta ruficollis* Near Egmere/Brancaster Staithe/Docking area (Norfolk), 3rd-10th January; Loch Leven (Kinross), 21st-23rd January, and Powmill area (Perth), until 28th January; Heigham Holmes (Norfolk), from about mid January until 29th January; Halvergate Marshes (Norfolk), 8th February; Kirton Marsh (Lincolnshire), 10th February. **American Wigeon** *Anas americana* Rogerstown estuary (Co. Dublin), up to 18th February. **Green-winged Teal** *Anas carolinensis* Singles in Ireland in Co. Antrim, Co. Down, Co. Wexford and Co. Cork. **Black Duck** *Anas rubripes* Achill Island (Co. Clare), through late January to at least 19th February. **Ring-necked Duck** *Aythya collaris* North Slob



Gary Bellingham

50. Ferruginous Duck *Aythya nyroca*, Fairhaven, Lancs, January 2001.



Brendan Hulme

51. First-winter Herring Gull *Larus argentatus* of American race *smithsonianus* (left), Cobh, Co. Cork, February 2001.



Matt Prior

52. Right, Laughing Gull *Larus atricilla*, Swindon, Wiltshire, January 2001.

53. Below, 'Black Brant' *Branta bernicla nigricans* (far right), Spurn, East Yorkshire, January 2001.



Mike Ashforth



Alan Tate

(Co. Wexford), female, January to 18th February. **Long-billed Dowitcher** *Limnodromus scolopaceus* Adult still wintering at Belfast Lough RSPB Reserve (Co. Down). **Laughing Gull** *Larus atricilla* Swindon sewage works (Wiltshire), 9th-13th January; same, Stewartby Lake (Bedfordshire), 27th January to 3rd February, the first record for the county. **Franklin's Gull** *Larus pipixcan* Tor Bay (Devon), 20th January to 11th February. **Bonaparte's Gull** *Larus philadelphia* Hinckley Point (Somerset), 3rd-11th February; adult near Liscannor (Co. Clare), 8th February. **Herring Gull** *Larus argentatus* First-winters of American race *smithsonianus*, two at Ballycotton (Co. Cork) and two at Cobh (Co. Cork), late January to early February. **Brünnich's Guillemot** *Uria lomvia* North Ronaldsay (Orkney), found dead, 29th January. **Bohemian Waxwing** *Bombycilla garrulus* Influx continued into second half of January and February, particularly widespread in Scotland, northern England and East Anglia; also throughout Ireland, where at least 250 reported in Northern Ireland during period. **Little Bunting** *Emberiza pusilla* Porlock Marsh (Somerset), 15th January to 9th February.

54. Bohemian Waxwings *Bombycilla garrulus*, Thetford, Norfolk, January 2001.

55. Yellow-browed Warbler *Phylloscopus inornatus*, Helston, Cornwall, January 2001.

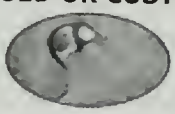


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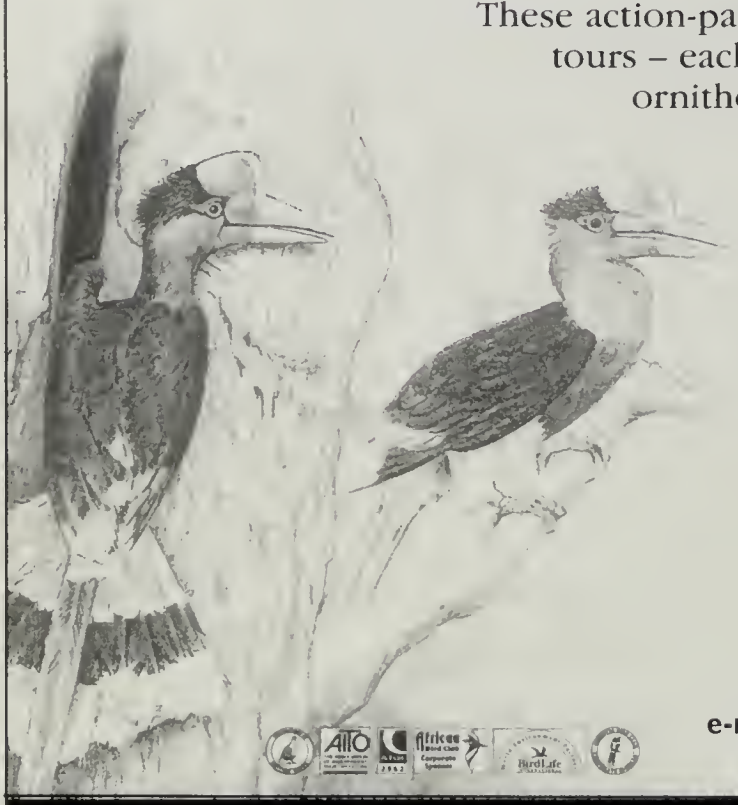
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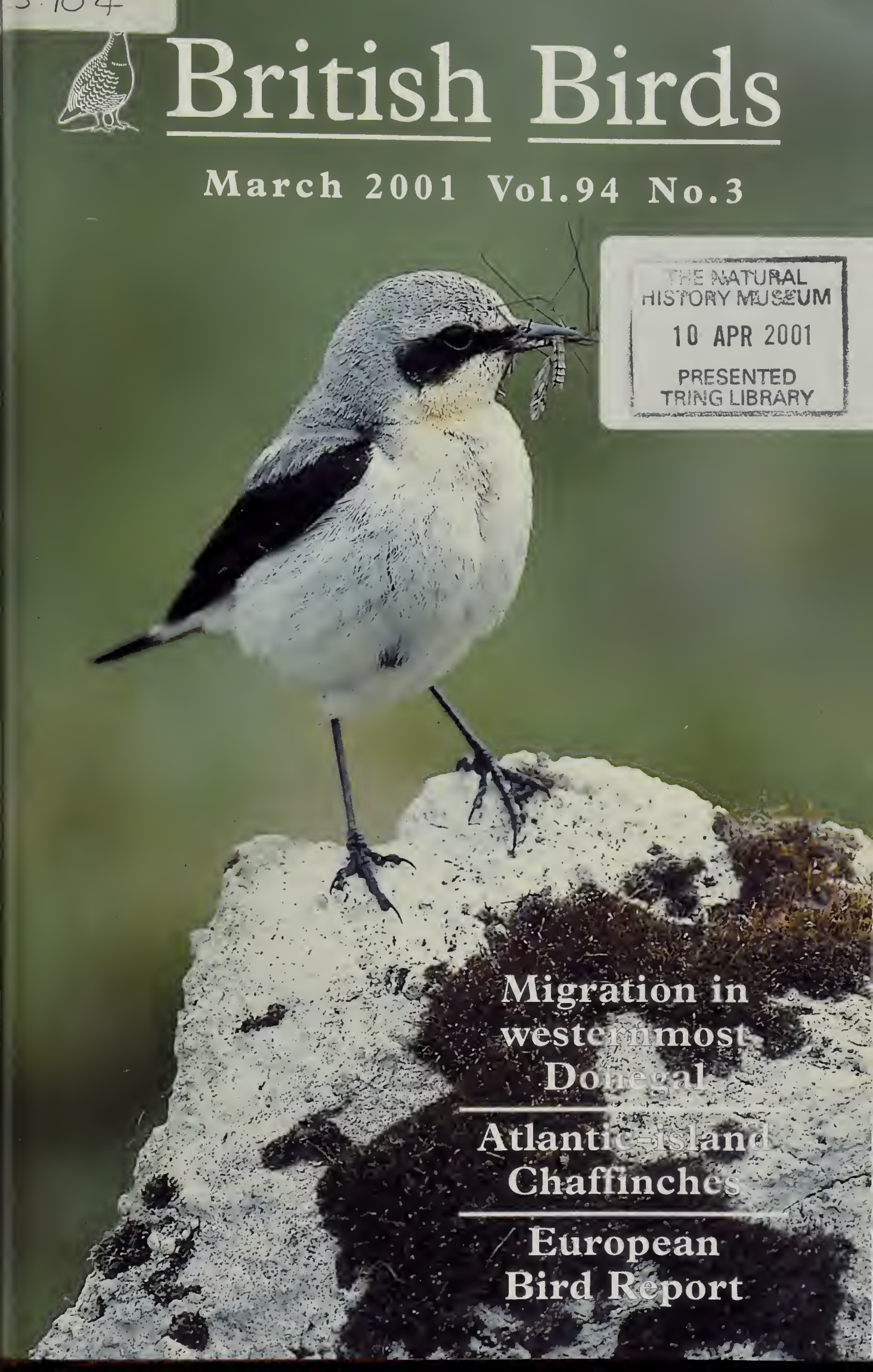
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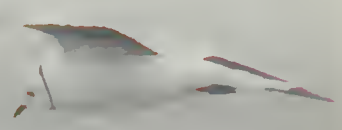
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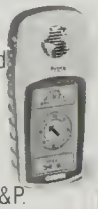
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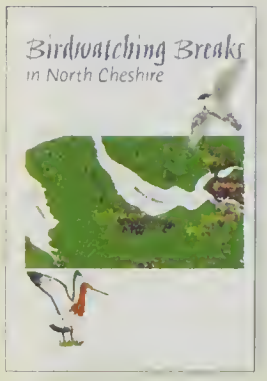
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Comment

Foot-and-mouth and birdwatching

Foot-and-mouth is the latest in a series of body blows to British farming in recent years. The outbreak of this disease has, however, had ramifications the effects of which extend far beyond those people directly involved with the livestock industry. The restrictions on access to the countryside, which have been imposed throughout Britain, have perhaps made many birdwatchers ponder more carefully the state of our rural environment. The BTO and the RSPB have been warning us for some time about the impact of changing farming practices upon farmland bird populations. Highly significant, these are nevertheless relatively long-term, insidious changes. By comparison, foot-and-mouth is sudden and dramatic. This being so, it is perhaps incumbent upon all of us to contemplate whether society as a whole, through its demands for greater choice, more convenience and lower prices in the shops, is therefore supporting the policies which shape our modern farming industry. The complexity of the processing and distribution systems that link consumer demand to agricultural supply has undoubtedly contributed to the rapid and wide-ranging geographical spread of foot-and-mouth. That complexity also confers a degree of fragility, making the rural environment particularly vulnerable to low-frequency, high-impact events such as an outbreak of foot-and-mouth. As birdwatchers, we have a natural desire to see the widest possible biodiversity in our farmland bird species. Modern farming methods will not encourage this.

Of course, with foot-and-mouth disease having taken a hold of the countryside, it behoves birdwatchers to act responsibly and to observe the restrictions on access to many places where we normally enjoy watching birds. For many of us, the direct consequences of the outbreak may be little more than a number of cancelled birdwatching trips. Depending on how the situation develops, though, it may well disrupt some of the research, monitoring and survey work that is an important part of many papers and other items published in *British Birds*. Indeed, a number of regular BTO surveys have already been suspended, and the Wetland Bird Survey (WeBS) has taken the decision to postpone until 2002 its Mute Swan *Cygnus olor* census that was scheduled for April and May this year (*Brit. Birds* 94: 93).

The plans for another complete survey, later this year, of the European Honey-buzzard *Pernis apivorus* population in Britain, reported in this issue, would certainly be affected if large chunks of the countryside were still out of bounds. This survey is an important step towards improving our knowledge of the small, but possibly increasing British population of the European Honey-buzzard. Although some have argued that the species may be less prone to disturbance than was once believed (*Brit. Birds* 92: 326-345), it is still an extremely rare (and therefore potentially vulnerable) breeding species. For this reason, surveys of all rare breeding species also demand the utmost respect and responsibility from each and every observer, as well as strict adherence to the survey instructions and, equally importantly, to the laws relating to disturbance of such species and their habitat.

On a lighter note, birdwatching is, for most of us, a hobby which we enjoy during our free time. A privileged few are professional ornithologists, as I was lucky to be a few years ago when wardening the bird observatory on Fair Isle, Shetland. But we *all* look for enjoyment from birds, something which is reflected by the government's inclusion of an index of common-bird populations among its 'Indicators of Sustainability'. The first article in this issue of *British Birds* is written by someone who, in my opinion, cannot be bettered when it comes to conveying the excitement of birding: Ian Wallace. His account of a series of autumn trips to westernmost Donegal is in some ways a sequel to his delightful essay on 'An October to remember on St Agnes in 1971' (*Brit. Birds* 65: 208-220). I read the original article for the first time only a few months ago, and was captivated by the energy, the excitement and the enthusiasm that marked those early days on Scilly. The vivid narrative and the vibrant illustrations combined so that adrenalin almost seeped from the pages. Pure enjoyment!

Roger Riddington

It will not have gone unnoticed that 'BB' has been late in arriving on subscribers' doormats this year. Associated with the editorial changeover have been inevitable delays, and we are working hard to rein these in. The practicalities of certain regular features, such as Monthly Marathon, mean that, once behind schedule, we can catch up only a week or two at a time. Please bear with us: we hope to be back on schedule within a few months. ***Eds***

THE NATURAL HISTORY MUSEUM
10 APR 2001
PRESENTED

Autumn migration in westernmost Donegal

D. I. M. Wallace, A. McGeehan and D. Allen



D. I. M. Wallace

The rock-strewn sward of Rocky Point, Co. Donegal, looking southwest. The gale-blown scree attracts transoceanic migrants. Featured here are some of the tenants of late September 1999: two unusual Dunlins *Calidris alpina*, feasibly of the Nearctic subspecies *hudsonia*, three Great Ringed Plovers *Charadrius hiaticula* of the arctic subspecies *tundrae*, three Lapland Longspurs *Calcarius lapponicus*, two Northern Wheatears *Oenanthe oenanthe* and four Meadow Pipits *Anthus pratensis*. The backcloth consists of Malin Bay, the Malin Beg headland and, in the far distance, the Sligo and Mayo hills.

ABSTRACT Never addicted to nor largely cured of twitching, three observers with nearly a century of migrant-hunting experience between them assaulted the westernmost cape of Co. Donegal, Ireland, in late September and October from 1995 to 1999. In the first four years, they were never bored; in the fifth, they may have discovered that not all reversed migrants that stray out over the North Atlantic fail to regain Palearctic land. In this paper, they advertise for fresh ornithological adventures on western headlands.

Study area

We use 'Rocky' as the name of our study area, which lies within the outermost 7 km of the south-western cape of Co. Donegal, Ireland. The name is taken from the main seawatch station at Rocky Point, the northwestern corner of Rossan Head, which in turn lies north of Malin More and west of Glencolmcille. The seawatch point's co-ordinates are 54° 43' N, 8° 42' W, and it is located 70 km south-southwest of Tory Island, 35 km south-southwest of Aranmore, and 80 km northeast of Erris Head on The Mullet peninsula of Co. Mayo (fig. 1). The oceanic waters that lie south of Aranmore reach into Maghery, Gweebarra and Loughros More Bays. On occasion these form a seabird trap, but, at little more than 200 km², their combined area is only one-sixth of the huge catchment of Donegal Bay (and a quarter of that recently sampled at Kilcummin, 40 km SSW on the west side of Killala Bay, Co. Mayo). The seawatch span of NNE to SSW is not ideal and, furthermore, both coastlines of the cape are dominated by high encliffed hills, Slieve Tooey (444 m) to the northeast and Slieve League (601 m) to the southeast. We sense that such precipitous landmarks act to deflect the seabird passage from the cape, but, conversely, they provide signposts to diurnal migrants.

At the end of the cape, the hill ridges and headlands are divided by three valleys: a narrow pass that leads to Port and stems from the bowl of Loughaherk; a quite wide riverine strath that runs down to Glen Bay almost due west from the interior hills; and a somewhat narrower vale that runs into Malin Bay almost northwest from a col near Lough Auva. South of Malin Bay, the western slope of Leahan (outlier of the Slieve League massif) falls into a boggy sump and, after a ridge, a grassed headland. All the grasslands, with the exception of the outer Port valley, support crofts and, increasingly, new homes. Structured villages exist at Glencolmcille and Malin Beg, but at Malin More the settlement pattern is ribbon-like. Crop cultivation is now limited to local needs; sheep (and barbed wire) are too common. In Glen Bay, the tidal surge has created a strand backed by 15-m marram dunes and, behind them, a short estuary divides into both a fast river and a floodplain of marsh, reedbed and marginal grazing. The latter is regularly flooded by the highest tides and spates, but drains quickly. As in most of Donegal, the estuary offers birds more shelter than it does food (see fig. 2 on page 105).

Within the grasslands and along the lower edges of the sheep moor and peatlands, all watercourses and many homes support relatively lush cover for birds, and the universal rule applies of Sycamores *Acer pseudoplatanus*, sallows *Salix* and seeding weeds providing the best niches for small migrants. Thus, we have been able to locate – in all but the Port valley – a series of gardens and crops that have, time and time again, attracted the bulk of the migrants and vagrants. How the birds find these so unerringly remains a mystery. During the hours of darkness, only the street lighting of Glencolmcille provides strong illumination. The automatic light on Rathlin O'Birne, an isle 2.5 km west of Malin Beg (see fig. 2), nowadays shines only dull red towards the cape, but in former days the powerful lighthouse beam attracted numbers of migrants, some of which struck the lighthouse and were killed.

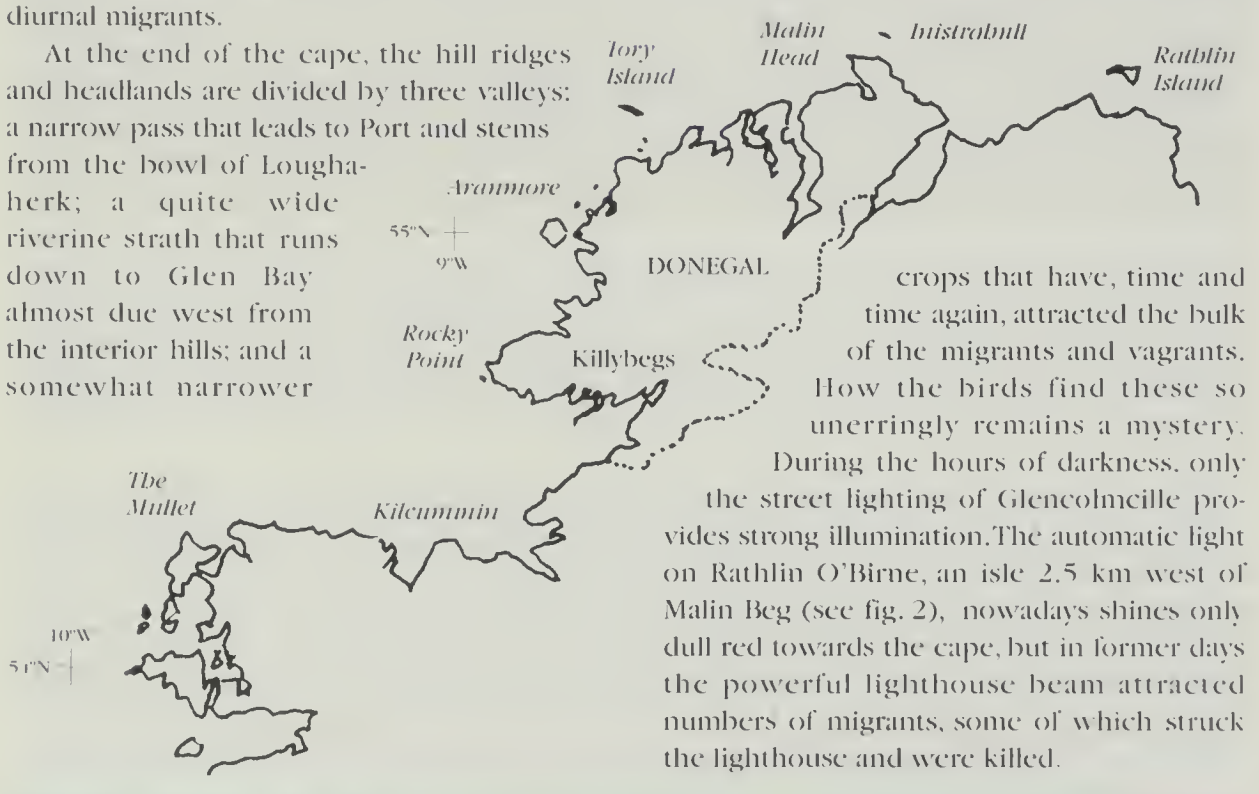


Fig. 1. Position of Rocky Point in relation to other observation points in Cos. Donegal and Mayo.

Table 1. Distribution of observations during 24th September to 31st October in the five years 1995-99. Figures show days covered as ratio of cumulative five-year total days for each week.

Week	24th-30th Sep	1st-7th Oct	8th-14th Oct	15th-21st Oct	22nd-30th Oct (9 days)	Total cover during 1995-99
Total days covered	13/35	10/35	12/35	12/35	6/45	53/185 (=29%)

Autumn study period and routine

Our study stems from the ornithological exploration of Donegal in the 1950s and 1960s (Gibbs *et al.* 1954; Pettit *et al.* 1960-66), and from the more recent landbird observations at Rocky by John O'Boyle (from 1986) and seawatches by Stephen Foster (from 1988). What we have added is systematic 'first-light to last-light' searches of migrant-bearing habitats, made on a total of 53 days between 24th September and 31st October over the five years from 1995 to 1999 (see table 1), and also on 4th November 1994 and 9th November 1999.

Our daily routine rapidly evolved into the following acts:

- A first check of Malin Beg, particularly a remarkable 'Magic Garden' of nearly constant lee and much insect food
- A full search of the Malin More vale, especially crops in the seaward fields and four treed 'gardens' inland
- An investigation of the estuary, marrams, crops, gardens and tree-courses at Glencolmcille (usually in the afternoons)
- Return visits to Malin More and Malin Beg prior to recourse to the pub for the next weather forecast and refreshment

The main interruption to the above routine was the impossibility of ignoring good seawatching conditions, principally strong wind in the NW quadrant. Altogether within our 53 days, 25 seawatches were conducted. Of these, 20 were made from Rocky

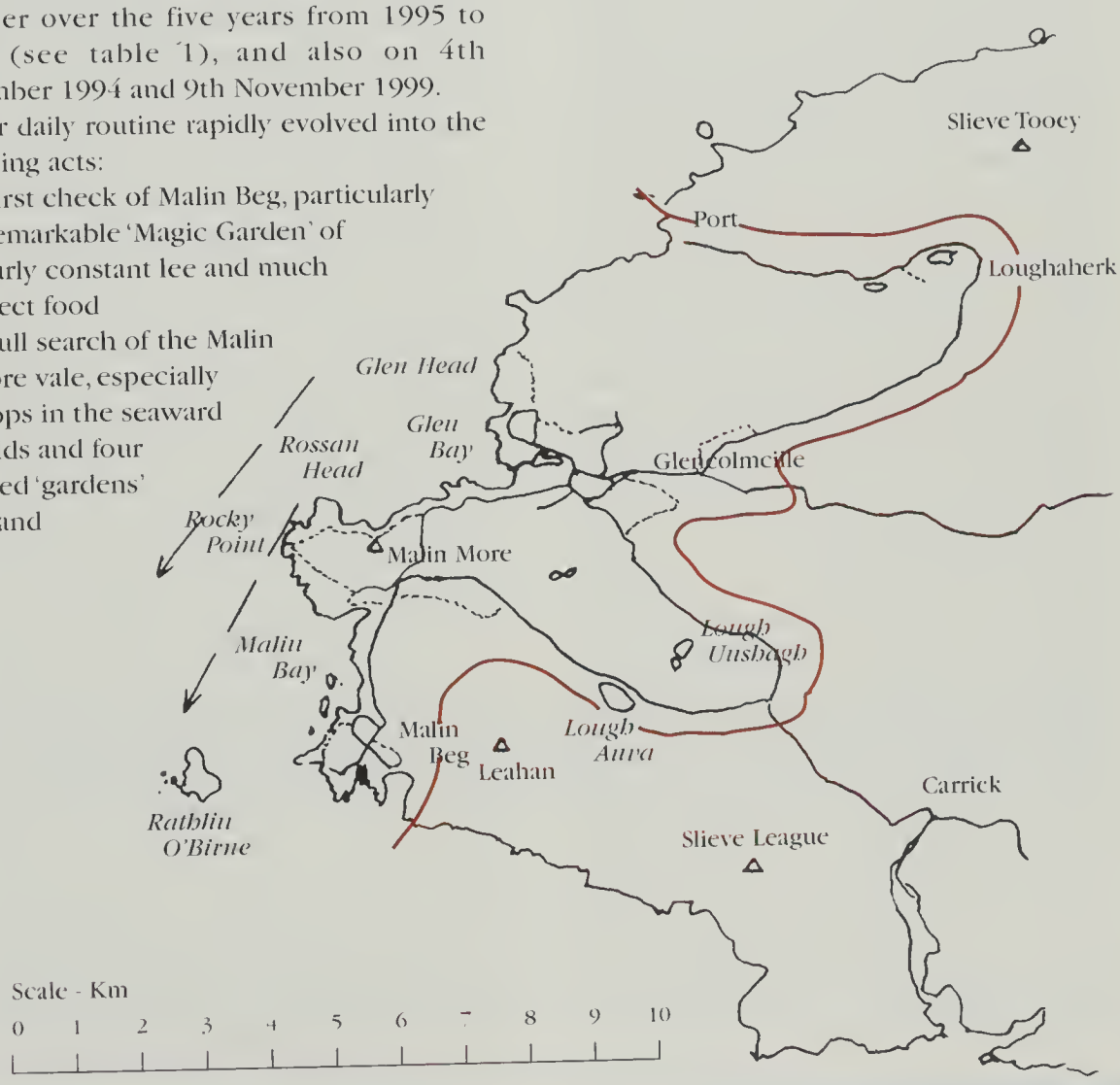


Fig. 2. The study area at Rocky, Co. Donegal.
Arrows indicate usual path of seabird passage; red line shows outer limit of study area.

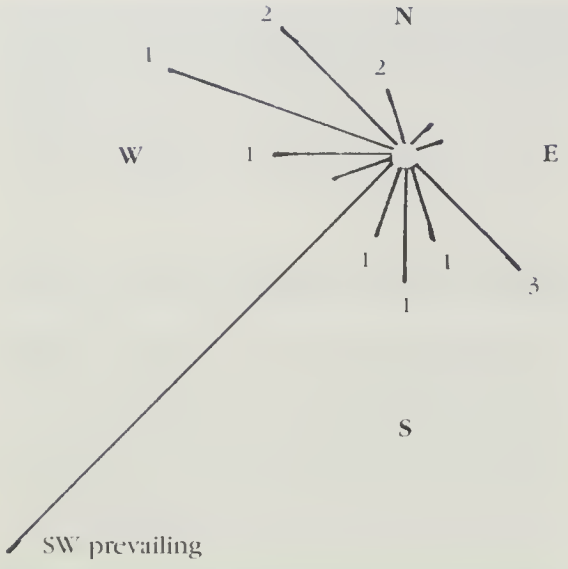


Fig. 3. Wind patterns at Rocky Point, Co. Donegal, late September to end October 1995-99. Figures denote number of blows of force 6 and over.

Point and lasted up to 5 hours, while five were made more briefly from Beg Head. We never experienced a classic 'SW going NW' blow, but onshore compressions of seabird movements were successfully sampled, most frequently from 08.30 to 11.00 and from 16.30 to 19.00 hours.

The only frequent loss of daily routine or seawatch potential has been from adverse weather, particularly North Atlantic squalls of low angle, high-speed rain and hail. Faced with such 'grey-outs', we allowed ourselves excursions to Killybegs, St John's Point (overlooking Donegal Bay), Sheskinmore Lough, and Kilcummin in Co. Mayo. Even with these wider explorations, it has remained difficult to relate any one day's weather to that day's passages, arrivals or departures, except in the case of seabirds. Fig. 3 displays the overall pattern of wind directions and higher speeds (of force 6 and over). Whatever the preceding wind, even brief periods of calm and/or sun always produced an increase in small-bird visibility, not, of course, a local phenomenon but never more welcome than after a Rocky gale.

In the main, our autumn visits have consisted of four 'hard slogs', enlivened by a few choice vagrants and one remarkable seabird pageant, and one more 'hard slog', enriched by unprecedented arrivals of night migrants, which together pose new questions on the vectors of small-bird movements over the nearshore ocean. Thus, Rocky is no place for twitchers, but it and the other headlands of northwest Ireland (and the Outer Hebrides) could yet deliver much to the study of migration in the northeast Atlantic. The reason why we believe this to be so is illustrated in the following discussion of migration at Rocky.

The late-autumn migrants at Rocky

A search by AMcG of all the published records for Donegal (e.g. Naylor 1996, 1998; *Irish Bird Reports* 1953-1997) revealed that, in spite of its limited ornithological exploration (the only intensive studies being 40 years old), the county has a remarkable history of extralimital vagrants and other intriguing migrants. An analysis of 93 records of 67 such species, dating back as early as 1825, has demonstrated that one in four of the birds has come from the Nearctic or from the Holarctic bridge formed by Greenland and Iceland, and that September still holds the lead in monthly autumn occurrences.

To the county observations Rocky contributed no exceptional records until 1884, and no rarity until an American Bittern *Botaurus lentiginosus* was found at Malin Beg on 21st October 1973. Indeed, the area's promise went unrealised until John O'Boyle began observations in 1986, producing vagrants as varied as a Pied-billed Grebe *Podilymbus podiceps* in April 1988 and two Yellow-browed Warblers *Phylloscopus inornatus* on 10th and 11th October of the same year. Even with such additions, Rocky's all-time diversity of autumn migrants was only 104 species up to 1994. Of these, 15 have not recurred from 1995 to 1999, but we have added 21 new species. The area's list of autumn migrants and vagrants up to 1999 stands at 125, or 133 if we include eight other species showing marked local movement. Our rate of discovery of new migrants and vagrants has been 0.44 species per workable day. This high quotient, coupled with the fact that Tory Island and The Mullet have at least another 22 species to their combined autumn credit, suggests an immediate autumn potential for Rocky of between 150 and 160 migrant species.

Our record of migration has been biased by two main artefacts: the 20 disciplined sea-

watches, and over 120 increasingly practised searches of habitats favoured by small birds. The seawatches produced repeated evidence of offshore long-distance passage by 30 seabird species, 11 wildfowl and nine waders, and also of strictly coastal arrivals by seven passerines. The passage rate of seabirds has reached 720 birds per hour. The habitat searches have demonstrated widely originated arrivals of three non-passerines, five thrushes, 15 chats, warblers and flycatchers, and three seed-eaters. Falls of normally nocturnal migrants have usually been small, from a handful to about 50 birds, but the day totals of all newly arrived passerines have reached 500. The off-passage period for night migrants appears to average three days. The true scale of nocturnal movement over Rocky, however, remains unknown. On the wild foggy night of 1st October 1997, three species of shorebird circled the street lights of Glencolmcille, but we have yet to hear any nocturnal calls from migrating passerines. This is in remarkable contrast to the situation at Tory Island and Inistrahull in the 1950s, where the number of birds in the beams of the lighthouse could be 100 times greater than the few left grounded at dawn (*Tory Island Bird Reports* 1959-1966).

Visible passage over land has not been systematically sampled, but the coincidental records of diurnal migrants have been surprisingly insubstantial. Only six non-passerine and 15 passerine species have flown over in the mornings or during later-timed weather breaks. Of these, only Meadow Pipit *Anthus pratensis* and six finches (Fringillidae) presented obvious arrivals or passage of tens or scores of individuals. Except at Glencolmcille, where westbound birds do rarely appear, the direction of visible movement has been away from the cape. Indeed, the only place regularly showing onward passage is the col of Malin More valley, over which birds invariably move southeast. A few have passed southeast over Malin Beg on a line that could take them over Donegal Bay, the southern shore of which is usually visible, but not once have we seen a migrant proceed from the cape out into the Atlantic.

With the type of approach or departure movement uncertain for at least 22 species, we are shy of firm conclusions, but it is likely that Rocky is normally a staging point of significance only to robust practised Atlantic migrants. Before 1999, we had found it difficult to judge the arrival of most small birds as other than accidental, but, as already indicated, the events of that year were to focus our minds on an entirely unexpected phenomenon. These points are qualified further below.

Notwithstanding the fact that any one day's appearances of birds at Rocky may seem inconsequential, the cumulative sum of actual or closely estimated numbers of migrants (not bird/days) has, over five autumns, reached nearly 29,000. This database has been analysed according to known or likely origin and migration vector, and the resulting profile is displayed in table 2. This shows that the area receives substantial migratory movements from the Holarctic bridge, particularly Greenland and Iceland, and large dispersals of South Atlantic tubenoses farther north in Irish waters than hitherto seen. It also confirms that other migrants and vagrants typical of the Northern Isles and the east coast of Britain continue to reach westernmost Donegal

Table 2. Migration from vectors observed or deduced at Rocky Point, Co. Donegal, compared with data from Tory Island 70 km to NNE.
See text for explanation of Tory Island figures; n.n. = not noted.

Vector	Total migrants in 53 days		Tory I equivalent	
Arrivals/passage of N Atlantic species	*21,059*	24,462	*2,640*	3,973
Arrivals/passage of Greenland/Iceland species	*3,403*		*1,333*	
Onshore compressions of S Atlantic tubenoses		3,642		0
Arrivals/passage of NW European species		691		239
Arrivals/passage of Irish/Scottish subspecies		51		n. n.
Vagrancy of E European/Siberian species		16		7
Totals		28,862		4,219



Fig. 4. Migration vectors at Rocky, Co. Donegal.

1. Normal southeasterly evacuation of Nearctic/Greenland species which winter in Ireland (e.g. Barnacle *Branta leucopsis* and Brent Geese *B. bernicla hrota*) or which regularly occur on passage (e.g. Northern Wheatear *Oenanthe oenanthe*, Lapland Longspur *Calcarius lapponicus*).
2. Southerly evacuation of Iceland/W European Arctic species from the Holarctic bridge which also winter in Ireland (e.g. Whooper Swan *Cygnus cygnus*, Great Northern Diver *Gavia immer*) or which pass through and around Ireland (e.g. Grey Phalarope *Phalaropus fulicarius*, Arctic Tern *Sterna paradisaea*, 'White' Wagtail *Motacilla alba alba*).
3. Western dispersal of Atlantic Ocean or high-Arctic tundra species (e.g. Pomarine Skua *Stercorarius pomarinus*).
4, 5, 6. Supposed reverse migration of Siberian or Asian species (e.g. Yellow-browed Warbler *Phylloscopus inornatus* and 'eastern' Common Chiffchaffs *P. collybita fulvescens/tristis*).
7. Vagrancy of Asian subspecies (e.g. 'eastern' Short-toed Lark *Calandrella brachydactyla longipennis*).
4, 7. Annual westerly dispersals or drifts of NW European species (e.g. Long-tailed Skua *S. longicaudus*, Scandinavian Rock Pipit *Anthus petrosus littoralis*, Pied Flycatcher *Ficedula hypoleuca*).
8, 9. Western dispersals of more southerly European species (e.g. Turtle Dove *Streptopelia turtur*, Red-breasted Flycatcher *F. parva*).
10. Apparent reverse migration of Iberian species (e.g. Melodious Warbler *Hippolais polyglotta*).
11. Vagrancy of Balearic Shearwater *Puffinus mauretanicus*.
12. Loop migration of S Atlantic shearwaters.
13. Southerly withdrawal of local E Atlantic populations (e.g. Faroes Common Snipe *Gallinago gallinago faeroeensis*, Meadow Pipit *Anthus pratensis whistleri*).
14. Apparent reorientation (from 4-7) of passerines from Iceland.

annually. We now suspect, but cannot yet prove, that many of the latter originally came west at much higher latitudes and subsequently 'spilled down' through the Hebrides to reach Donegal. Certainly, we have noted far more links with occurrences on Fair Isle, Shetland, and other northern locations than is the case at Cape Clear Island, Co. Cork.

The vectors of migration to Rocky are further displayed in Fig. 4.

The equivalent numbers of migrants on Tory Island (shown in table 2) have been constructed in order to allow some comparison with the scales of passage recorded there 40 years ago. To calculate them, we assembled only the observatory's diurnal-migrant counts within our total period of observation, and then reduced these to scores of 40% in order to apply an equal time factor (our main 53-day period). We consider that the Tory quotients are trustworthy enough to demonstrate that Rocky, in spite of its lower diversity of species and the drift shadow cast by internal Donegal immediately to the east, harbours far more migrants than did or does Tory Island. Tory's compa-

rable discovery rate of new migrants and vagrants was (during our observation period) only 0.2 birds per day, no more than half that at Rocky. Even so, we would still be the first to express some envy of Tory's continuing ability to pull in absolute rarities.

Rückzug (backward journey) from Iceland?

Since we knew that the area already had two Nearctic birds to its credit, one of our initial wishes was for another transatlantic waif, especially a passerine. We even christened habitats in readiness: '*Catharus* wood' and 'waterthrush alley', for instance, to name the two that have stubbornly remained barren of any such bird.

From 1997, however, our expectations altered. It took a Newfoundlander, Bruce Mactavish, to alert us fully to the remarkable annual drifts of Eurasian night migrants to Iceland. In 1999, BM again warned us of another such fall just before our start date at Rocky. So, we went there agog with the thought that we might find linked occurrences of reversed migration (a concept that we understand, but do not accept as the complete answer to all avian vagrancies) or a suite of species and dates that would indicate reorientation from a potential Atlantic grave.

To our growing astonishment and great delight, Rocky received, between 24th and 29th September, its first sizeable passage of warblers and Pied Flycatchers *Ficedula hypoleuca*. This comprised at least 102 individual birds, a number which swamped the prior four-year (43-day) total of only 60 birds for the same families. Clearly, somewhere, a quite exceptional migration vector had existed. It could not have stemmed from a classic North Sea drift. The east coast of Britain was unusually barren (and stayed so until mid October), and only in the Northern Isles from 17th to 21st September were there any marked arrivals (e.g. *Stronsay Bird Report* 1999). When full details of the Iceland occurrences came from Yann Kobleinsson (per BM), we noticed immediately that these had peaked on 18th September, with 24 new discoveries just six days before we began our observations. Table 3 shows the similarity of the species mix of our late-September passage to that noted in Iceland a week earlier (the glaring absentee is Common Chiffchaff *Phylloscopus collybita*: normally it outnumbers Willow Warbler *P. trochilus* in Iceland by 2 to 1, and it has always been our commonest warbler at Rocky). There was no such reflection of the passage profile of the Northern Isles, where Blackcaps *Sylvia atricapilla* far outnumbered all other species. The phenomenon was apparently repeated in late October when, between 19th and 24th, Iceland received at least 29 Blackcaps; on 23rd October, Rocky held no fewer than 23 in its gardens, where there had never before been more than four at this time.

With hindsight, and with further research into Icelandic drift patterns, we sense that there could be other parallels between arrivals noted at Rocky and those in areas elsewhere in northwest Ireland and northern Britain. The most surprising may be provided by the Common Crossbill *Loxia curvirostra*. We have been amazed by that species' regu-

Table 3. Warblers and flycatchers recorded in Iceland and at Rocky Point, Co. Donegal, in September 1999.

Species	Iceland, 17th-30th Sep	Rocky, 24th Sep to 7th Oct
Melodious Warbler *Hippolais polyglotta*		1
Barred Warbler *Sylvia nisoria*	2	
Lesser Whitethroat *S. curruca*	2	
Garden Warbler *S. borin*	11	6
Blackcap *S. atricapilla*	8	8
Arctic Warbler *Phylloscopus borealis*	1	
Yellow-browed Warbler *P. inornatus*	1	
Common Chiffchaff *P. collybita*	1	
Willow Warbler *P. trochilus*	12	20
Goldcrest *Regulus regulus*	15	32
Spotted Flycatcher *Muscicapa striata*	1	
Pied Flycatcher *Ficedula hypoleuca*	5	12
Totals	59	79

larity at Rocky, with a 53-day total of 80 birds in parties of up to 21. In Iceland, it has recently outnumbered all other European finches or other passerine migrants. If close-timed arrivals of Common Crossbills occur in Iceland and westernmost Donegal, they could signify irruptive movements with origins anywhere across northern Europe, rather than stemming from populations breeding closer to Donegal.

Thus, while our understanding of bird migration in the northeast Atlantic was well founded by the work of Kenneth Williamson and the other pioneers who observed Atlantic headlands in Britain and Ireland 40 years ago, it may be that the then widespread studies were collapsed too soon. Proof of truly serial occurrences after Icelandic drifts would force upon us an entirely new respect for the navigational abilities of birds supposedly lost over an inhospitable ocean.

Notes on selected species

Since many of our observations have merely repeated earlier findings or have already appeared in monthly journals, we highlight here a selection of familial or specific discoveries. Five more can be found in the excerpts from our log that close this article.

Divers Our records feature 119 Great Northern Divers *Gavia immer*, 51 Red-throated Divers *G. stellata* and three Black-throated Divers *G. arctica*. With up to 19 per hour in late October and regular indications that individuals pass all day, the total passage of Great Northern Divers could reach 1,000 or more in a full autumn (to the end of November). Such a large contingent is unlikely to be supplied by the Icelandic population of 300 pairs (Snow & Perrins 1998).

Balearic Shearwater *Puffinus mauretanicus* One off Malin Beg on 14th October 1996 was the fourth for Donegal, and the first for 32 years. Only three were seen off Tory, in 1963 and 1964 (Pettit 1964-65).

Barnacle Goose *Branta leucopsis* Only 159 have been seen in passage movements, but early-morning counts on Rathlin O'Birne have indicated the presence of up to 750. Whether these arrived over preceding days or following nocturnal flights is not clear (but see Postscript on page 119).

Gadwall *Anas strepera* Rarely seen on sea-watches. A flock of 15 on 19th October 1998 appeared with divers, Greenland White-fronted Geese *Anser albifrons flavirostris* and Eurasian Teals *Anas crecca* and must surely have come from Iceland.



D. I. M. Wallace

Fig. 5. Arctic Ringed Plovers *Charadrius hiaticula tundrae* in first-autumn plumage, Glen Strand, Co. Donegal, 28th September 1999 (a) and 19th October 1995 (b, c), compared with similarly aged immature of local breeding population (d). Finished drawing from field sketches.
All three *tundrae* smaller by 5-10%, with slighter bill and less extended wing and tail tips; head pattern recalled Little Ringed Plover *C. dubius*, with forecrown patch reduced to spot on two and rear supercilium narrower; upperparts slightly darker, with olive to umber hue; legs (of b and c) proportionately slightly longer and (all three) duller, with dull grey to greenish-yellow tone; gait a fraction nimbler, with impression of more foot. All suggested Semipalmated Plover *C. semipalmatus*, but clearly were not that species.

Arctic Ringed Plover *Charadrius hiaticula tundrae* Two juveniles at Glen Bay on 19th October 1995, two adults and a juvenile at Rocky Point on 24th September 1999 and another juvenile at Glen Bay on 29th September 1999 were subjected to scrutiny and direct comparison with nominate Great Ringed Plovers (see fig. 5).

Skuas We recorded 121 Pomarine Skuas *Stercorarius pomarinus*, 70 Arctic Skuas *S. parasiticus*, 13 Long-tailed Skuas *S. longicaudus* and 233 Great Skuas *Catharacta skua*. With the exception of the Long-tailed Skuas, all but one of which were juveniles, most have been adults.

Fennoscandian gulls With a treasure trove of fish and gulls 'over our shoulder' at Killybegs, we have been disappointed by those that have passed the cape or briefly sheltered in its foodless bays. Two Lesser Black-backed Gulls *Larus fuscus intermedius* on 29th September 1997 and one 'northern' Herring Gull *L. argentatus argentatus* three days earlier provide our only evidence of large gulls from Fennoscandia rounding northwestern Ireland. Interestingly, however, there are claims of *L. f. fuscus* ('Baltic Gull') from Inishtrahull on 13th-14th September 1953 and at Tory Island on 21st and 24th August 1960. Also on Tory, three 'Scandinavian' Lesser Black-backed Gulls *L. f. intermedius* were noted in April and May 1964.

Sky Lark *Alauda arvensis* With only 101 Sky Larks in the first four years, and no flock exceeding 35 individuals, even in 1999, there is little evidence of the strong (former) passage through Tory and along the Donegal coast continuing southwest to Rocky. Only five birds have been seen to come in from the northeast, on 24th October 1998, and none has gone on past Malin Beg. From morning counts, it appears that, as with other normally 'brave' diurnal migrants, departures from the cape are initiated during darkness. The 1999 larks allowed close approach: up to 25 rufous individuals in the Glen Beg marrams during 25th-30th September were apparently of the race *scotica*; and a distinctly large, pale lark at Malin Beg from 26th to 29th September resembled the Central Asian subspecies *dulcivox*, constituting a remarkable echo of an eastern form of Short-toed Lark *Calandrella brachydactyla* at Malin More from 19th to 25th October 1998 (see also pages 116 & 117).

Chats With only 15 Northern Wheatears *Oenanthe oenanthe* from 1995 to 1997, and none in 1998, the quite exceptional passage of at least 58 birds in 1999 received close attention. The biggest arrival, of 31 on 29th September, was at least partly diurnal. The sizes of the birds ranged strikingly from small to large; most were judged to be '*schioleri*' from Iceland, but at least five were hulking *leucorhoa* from Greenland; many of the last 30 birds were adult males. This dramatic upsurge in passage/presence provided further support for the view that many of the smaller night migrants of late September 1999 came from Iceland. Robins *Erithacus rubecula* reach Iceland annually, in autumn as late as early November (Pétursson 1997). Once again there is an apparent parallel at Rocky, with up to four birds (at least ten in all) resembling nominate *rubecula* appearing from 24th September to 25th October. During 1959-62, Tory received few Robins, usually single birds (about 17 in total) earlier in autumn, from 2nd September to 16th October (Pettit 1960-63). No migrant Robins were noted in north Donegal in 1953 (Gibbs *et al.* 1954).

Redwing *Turdus iliacus* At Rocky, the Icelandic subspecies *coburni* is the dominant form, with the biggest passage, of up to 420, observed from 17th to 25th October 1998. Definite attributions to nominate *iliacus* have featured no more than six birds, from 12th to 21st October in 1995 and 1998. Yet the latter subspecies was much the commoner at Tory from 1959 to 1966.

Siberian warblers Rocky's four Yellow-browed Warblers include a 'multiple arrival', at Straboy on 10th October and at Gleneolmeille on 11th October 1988, and two others that have found the same garden at Malin More on, respectively, 13th-14th October 1995 and 14th-17th October 1999. In addition, close inspection of all *Phylloscopi* has led to Common Chiffchaffs at Malin More on 4th November 1994 and 23rd-25th October

1998, and at Malin Beg from 20th to 22nd October 1998, being attributed to the far-eastern end of the species' cline.

European tits A few of the local Coal Tits *Parus ater* are strikingly yellow-cheeked; most, however, are only washed with yellow on their cheeks. All show a markedly olive mantle and sullied flanks. In distinct contrast to them, sparklingly clean individuals resembling nominate *ater* of continental Europe and Asia have appeared at Glencolmcille from 19th to 23rd October and at Malin More on 23rd October 1998, and again at Glencolmcille on 24th and 27th September 1999 (two). Another, this one resembling *britannicus* of Britain and northeast Ireland, was at Glencolmcille on 28th September 1999. In 1997, the local population of Coal Tits reached a peak of approximately 95 birds on 26th September, and there was marked local movement of up to 25 birds travelling southeast along the Malin More valley during the next five days. Blue Tits *P. caeruleus* with the bright contrasts of Continental nominate *caeruleus* were at Glencolmcille on 19th October 1998 and 1st October 1999.

Crows The local Eurasian Jackdaws *Corvus monedula* have a dusky shawl and the generally grubby appearance typical of the cline end: western *spermologus*. In contrast, a beautifully marked bird, complete with whitish epaulets, on 14th-17th October 1999 matched the east European subspecies *soemmerringii* (plate 56).

Finches Neither European Chaffinches *Fringilla coelebs coelebs* nor Bramblings *F. montifringilla* reach Rocky regularly. Up to three of the former appeared from 30th September to 22nd October in 1996, 1997 and 1998; only one of the latter has been seen, on 29th September 1997, and this may also have been a returning Atlantic waif (see page 109). Brambling is the second-commonest finch to reach Iceland.

Unlike *Fringilla*, members of the genus *Carduelis* appear together in marked falls, and the birds then embark upon early-morning searches for feeding habitat. The commonest is Siskin *C. spinus*, with 107 birds noted, then Goldfinch *C. carduelis*, with 100, and Greenfinch *C. chloris*, with 19. Their observed departures have all been to the southeast. Typical Lesser Redpolls *C. cabaret* breed in the sallows of Glencolmcille and wander to Malin More and Malin Beg; up to 14 have been seen annually.

Only one Mealy Redpoll *C. f. flammea* has been identified (on 26th September 1999), but at least seven birds of a third and highly distinctive taxon have occurred at a total of six sites in 1995, 1997 and 1999. All of the latter have been large, close in size to Twite *C. flavirostris*, and those well seen, and especially the two photographed in 1997 (plate 57 on page 114; see also fig. 6), have fully matched in appearance the Greater ('Greenland') or Icelandic Redpolls ('Northwestern' Redpolls) *C. f. rostrata/islandica* trapped and photographed on Fair Isle on similar dates (*Dutch Birding* 20: 6, plate 223; Dr R. Riddington *in litt.*). The Irish Rare Birds Committee pended our first (1997) claim and have failed to reply to our enquiries about their reasons for so doing, but we are absolutely certain that our large redpolls have come down the Greenland–Iceland flight path. The full set of records is: two at Malin More on 15th October 1995; one at Malin More and Malin Beg on



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56. Eurasian Jackdaw *Corvus monedula* showing whitish epaulets typical of the northeastern subspecies *soemmerringii*, Glencolmcille, Co. Donegal, 14th-17th October 1999.



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Fig. 6. Lesser Redpoll *Carduelis cabaret* (nearest), two 'Northwestern' Redpolls *C. flammea islandica/rostrata* and Twites *C. flavirostris* feeding in crop weeds, near Glen estuary, Co. Donegal, 30th September 1997. (See also plate 57.)



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57. 'Northwestern' Redpolls *Carduelis flammea islandica/rostrata*, Glen Bay, Co. Donegal, 30th September to 5th October 1997.

26th September 1997; two at Rocky Point on 26th September 1997 and subsequently at Glencolmcille until 5th October (plate 57); one at Malin More on 24th September 1999; two at Glencolmcille from 25th to 27th September 1999, one remaining and seen occasionally until 2nd October; and one at Malin Beg on 3rd October 1999. Clearly, the absence of records of this taxon from Ireland in recent decades has been unreal.



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58. Male Lapland Longspur *Calcarius lapponicus* in fresh autumn plumage, Rocky Point, Co. Donegal, late September 1999.

Finally, our records of the supposedly sedentary Common Bullfinch *Pyrrhula pyrrhula* – two at Glencolmcille on 31st October 1997, and another flying west at Malin More on 9th November 1999 and calling like nominate *pyrrhula* – are noteworthy.

Lapland Longspur *Calcarius lapponicus*
Despairing of a fine bird that can be regular in early autumn on Tory, we felt great relief in 1999 when the scree of Rocky Point attracted two on 24th September and up to five birds (at least six individuals) daily from 25th September to 2nd October, with one apparently hanging on until 9th October (plate 58). Again, there can be no reasonable doubt that they had come from Greenland.

Excerpts from the Rocky log

The first of our six tales, all paraphrased from DIMW's diary, concerns a rejected record of a bird which has nevertheless become a triple mystery, hopefully to be elucidated soon.

'14th October 1995. Rocky 1, day 8. Back at Glencolmcille, I opted for both sides of the estuary but the Linnet [*Carduelis cannabina*] flock enticed me into the north side of the marrams. I made for the strand but a snipe got up. "Jack" [*Lymnocryptes minimus*], its darkness said, but it wasn't. Dark it stayed, however, and, as it banked around a marram breast, it showed me a wholly dark and closely barred underwing. Then it promptly disappeared. Confused, I decided on a rest and a check of the beach. No Ringed Plovers there and, rather hopelessly, I went back for the snipe. Amazingly, I must have walked within 20 yards of it, but it waited until I was past before getting up to tower high enough nearly to break my arthritic neck. But I hadn't been duped, for the underwing stayed uniformly dusky. What to do? The answer was to ford the river and muster forces. Within 40 minutes, the three of us were thrashing the entire marram sward. The result was highly fortunate: two Common Snipe [*Gallinago gallinago*] (undoubtedly *faeroeensis*, far too warm for it), then two more, then it maybe (but without underwing grip), then another Common Snipe. We paused to reorientate and pushed on: two more Common Snipe, then it again (with Dave but not Anthony seeing the underwing), then another Common. Mercifully on the next drive, it flushed first, towered and went a long way to the south. I lost it against the hillside but, astonishingly, Anthony marked its final plummet into a crop patch. This was a third of the way up the valley's escarpment. We got to a rough field. "It'll be on the brow", he said – and it was. We all got a superb flight view of the bird as it took off without jinking and then went right, in front of the dark tree canopy around the priest's house. A full bank revealed the underwing and flanks to be indeed wholly darkly barred. Relief for me and handshakes all around'.

Our combined notes on this bird (fig. 7) detailed not just the underwing, but also a thin, dim trailing edge to the wing and a distinctly blackish ground colour to the upperparts. These marks and a few more were not enough to convince the IRBC of a Wilson's Snipe *G. (g.) delicata*, and birders' rules would normally mean consignment of the record to the bin. We have since, however, flushed two more identical birds, on 1st October 1997 and on 23rd and 24th October 1998. We have also learnt from BM that Wilson's Snipe is a common migrant in Newfoundland, moving through as late as November. The question posed by these dark and dusky snipe is open, not shut.



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Fig. 7. Flight patterns of migrant Common Snipe *Gallinago gallinago*, western Donegal. From comparative field sketches of individuals on 14th October 1995 and 1st October 1997. Right, typically patterned bird. Left, dark type, with blackest ground colour of upperparts, narrower trailing edge and less obvious mottling on fore coverts of upperwing, fully barred underwings and flanks, clouded breast and restricted white belly, and only white flecks on tail corners – all differences suggesting Nearctic race *delicata*.

The second tale comes from the exploits of 'Terrier' Dave, who can find birds in bushes like no-one else.

'15th October 1996. Rocky II, day 4. I bashed inland up the Glencolmcille valley but soon ran out of migrants, returning rather slow-footed with only a flock of 16 Mistle Thrushes [*Turdus viscivorus*] to crow about. Some sketching seemed a good form of recuperation, but suddenly the front door swung open and the shout of "RED-BREASTED FLY-CATCHER!" [*Ficedula parva*] filled the cottage. As we waited for Anthony, Dave's smile never even flickered for, on top of last year's Yellow-browed Warbler from Siberia, we now had a Middle European passerine in the bag.

'So "tea and bun", then off across the valley bottom to a sentinel-like copse of high Sycamore and dense shrubbery surrounding an isolated farmhouse. There was no sign of the bird in the canopy, but what was it that leapt out from the lee of a bramble thicket? One flash of the white tail spots and we all had it. Remarkably tame, it sat in the shade, looking up at the pale sky to spot insects. When one appeared in front of our assembled faces, the little charmer took its prey almost off my nose.'

Typically for such a waif at Rocky, the flycatcher spent five days off passage in what became 'RBF garden' and in a huge fuchsia bank nearby.

The third story is down to Anthony, whose tendency suddenly to yomp cross-country to the seawatch point is always worrying but often pays dividends.

'29th September 1997. Rocky III, day 4. From the Malin More crossroads, the look on the face of the approaching McGeehan was distinctly unnerving. Dave and I braced ourselves for a gripping: "Couldn't resist the sea: 32 Great Shearwaters [*Puffinus gravis*]. We've got to go back." Somehow we managed to be sensible, hammering back to Glencolmcille for "brunch" and then out to the point. As tail-end Charlie, I made the mistake of going to Stephen Foster's rock lair rather than joining Anthony and Dave behind better shelter to the south. This awkward split of forces lost them the chance of seeing my close-in, trough-hugging Little Shearwater [*P. assimilis*] (since rejected). None of my yells reached their ears, but the painful failure soon ebbed as, bit by bit, we glimpsed and then saw fully the majesty of the Great Shearwater movement. Incredibly, the "beast from way down south" was the commonest seabird, with party after party going by, looking for all the world like lines of kites strung on endless twines, so regularly spaced were the birds and so synchronised their "rising and falling". The flocks contained up to 130 birds apiece and they never really stopped. So passed five happy hours, with divers, constant Sooties and Manxies [*P. griseus* and *P. puffinus*] and at least 6 Sabine's Gulls [*Larus sabini*] adding to the fare. It was a real pageant, all the more wonderful for the canvas of a blue, blue sky and a wind warm enough for shorts.'

Our fourth episode shows how you should never give up on a stray bird.

'19th October 1998. Rocky IV, day 3. It is always worrying when one of us is late for "group-up", and the triumph in Anthony's footsteps as he charged in, at well after five o'clock, was inescapable. "SHORT-TOED LARK" was his crescendo announcement, "in a crop field at outer Malin More". We hightailed it to the spot but, alas, there was no sign of the bird in the fading light. And also none on either of the next two days.

'On 22nd October, Anthony and I opted for a sabbatical at Sheskinmore Lough but Dave stayed loyal to home. We were back at base at lunchtime and were met by a beaming Dave. He had refound the lark in its original patch. Anthony's pain dispelled like air from a balloon, but total group joy was still not easily achieved. Our first joint approach flushed every bird from the potatoes and weeds and, yet again, we were casting empty nets. Happily, at 15.45 hours, the wee lark slipped back in from nearby grassland to give us all good views of its dull, drab, distinctly slight-billed self (fig. 8). I agreed that it was a *Calandrella* but was it really Short-toed? If Hume's Lark [*C. acutirostris*] had got to Israel, could it get to Donegal?'

It took a visit to the Natural History Museum at Tring to confirm that, this time, although we had a good bird, true eastern promise in the form of Hume's had not been fulfilled.

Our fifth tale is of a response to competition.

'24th September 1999. Rocky V, day 1. At tea, Anthony phoned the Irish Birdline and announced that our morning's single Cory's [*Calonectris diomedea*] had been totally eclipsed by 250 Great Shearwaters off Tory. The day's last ploy for him and me could be only the reinstatement of Rocky as top Irish seawatch spot of the day, and so we departed smartly for the point. The start of the seawatch was delayed by more drooling over the Lapland Longspurs on the scree, now also joined by three *tundrae* Ringed Plovers and two pale, incredibly long-billed Dunlins [*Calidris alpina*] (feasibly *hudsonia*) (heading illustration; see also fig. 9 on page 118), but at 17.20 hours we were wedged into rocks and staring north. One Bonxie [Great Skua] went south, but the next 25 birds were all Great Shearwaters, going – to our amazement – north across the northwest wind. For the following 85 minutes I had time only to write down what Anthony called out. It was not long before a flock of 90 Great Shearwaters smashed Tory's 250 by taking our count to 307. "Give up?" "Not yet." Our 1997 flock record of 130 fell to a veritable phalanx of 260 birds, and only at 706 did we decide that the pub was allowable. On our way back across the moorland, however, we were faced by a distant and unusually gesticulating Dave. Accelerated movement over bog was achieved and at last we could decipher his shout in the wind: "*Hippolais* in Magic Garden". There followed a car sprint and, in the dregs of daylight, we bagged a superlative Melodious Warbler [*H. polyglotta*] (destined to spend the following 16 days in the same 20 yards of Lusitanian cover). Doubly rewarded for our afternoon's efforts, the pub needed no further avoidance.'

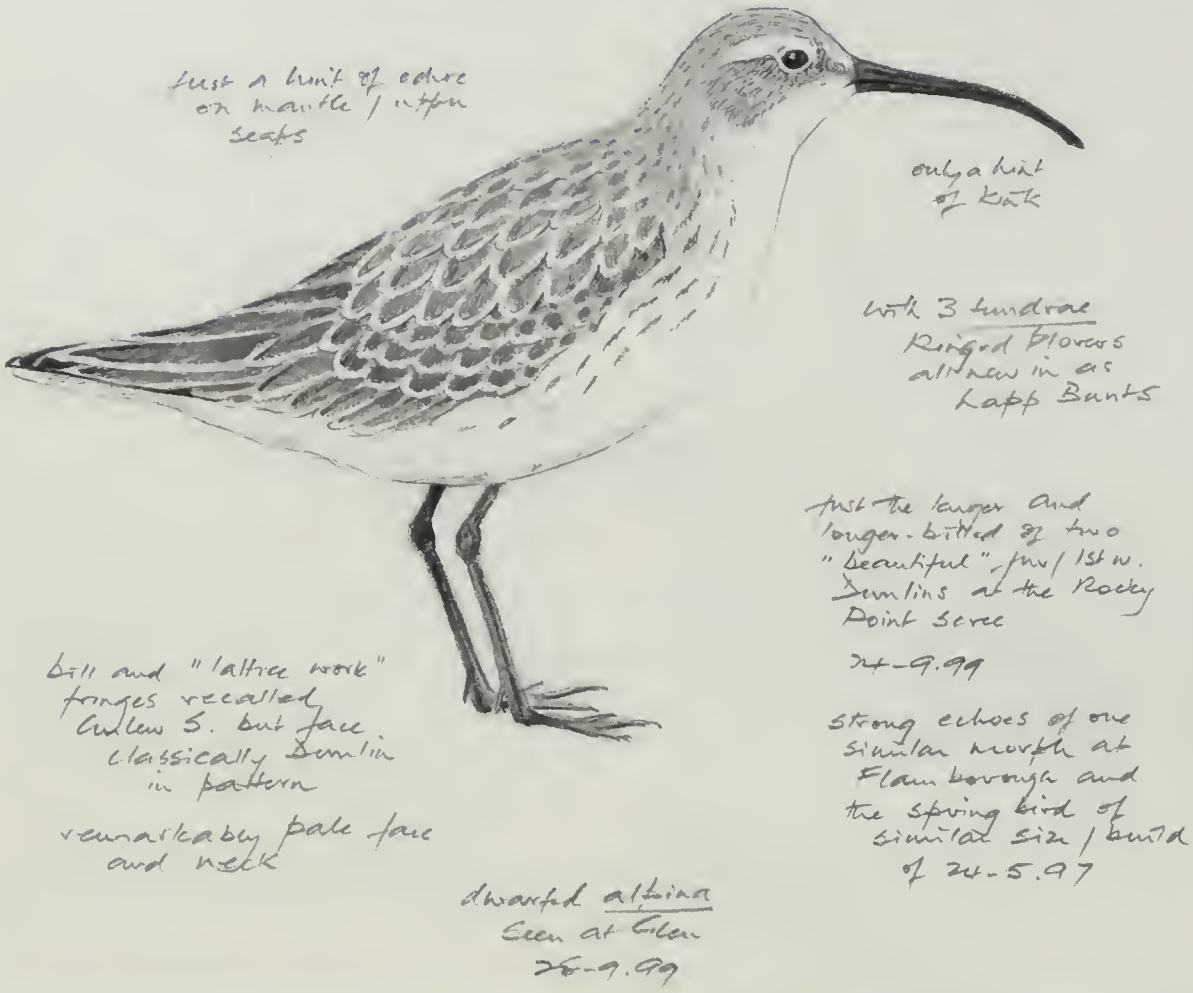
No migrant hunt is complete without good birds lost. Here is our last story, of two misses.

'26th September 1999. Rocky V, day 3. Straight to Malin Beg. Decide to check top lane. First bird "white



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Fig. 8. Short-toed Lark *Calandrella brachydactyla*, Malin More, 19th-30th October 1998. Painted field sketches.
Exceptionally drab, lacking any warm plumage tones, and fine-billed; presumably of Asian race *longipennis*. Confusion with Hume's Lark *C. acutirostris* ruled out by both face pattern and call.



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Fig. 9. Large, long-billed Dunlin *Calidris alpina* at Rocky Point, Co. Donegal, 24th September 1999. Finished drawing from field sketches.
One of several subspecies puzzles set by renewed Donegal observations: size, structure, early moult to first-winter plumage, and flank streaks all point to the race *hudsonia* of north-central Canada (see also *Brit. Birds* 94: 30).

wagtail" on fence wire, with screaming wingbar and oddly plain face. Stupidly, I don't react; push on. Flush bird near cow byre, only to have it immediately attacked by local pair of kamikaze Pied Wagtails [*Motacilla alba*]. Size, tail length and "dzeep" call all highly Citrine[*M. citreola*]-like, but not surprisingly it departs at great speed. All I can log is a ghastly miss.

'After lunch, opt to flog around marsh on northern side of Glen Bay. Fantastic sun induces sudden heat, butterflies, and removal of jacket, the last act leading to loss of both glasses and favourite drawing pencil in dense Bog Myrtle [*Myrica gale*]. Personal disaster looms, but retracing of steps produces first a Tree Pipit [*Anthus trivialis*] and, second, miraculous recovery of artistic aids. Next event less happy, a nasty hoodwink pipit with streaked rump. Suspect it must be worn adult Meadow but decide that tea crucial to restoration of calm; head for cottage.

'At the concrete bridge, I spot Anthony combing a patch of low cover on the other side of the estuary. He looks edgy and no cheery wave cometh. Instead, he trudges through the river shallows towards me with a distinct air of introspection. "I've had a small bunting; it flew over the river. Did you see it?" I said "No, but can't you do better than that?" He replied "Not really; it got up from the potato patch along with a Meadow Pipit and landed on a fence post. I was looking at it into the sun and started to see a stripy head pattern. Unfortunately, I needed the scope to clinch it. The pipit flew and took the bunting with it, although it then landed alone on a more distant post. If the ground between me and it had been a minefield, I could not have walked more carefully: but it cleared off before I got close enough to nail it." "So what on earth was it?", I said. Crestfallen and visibly shaken, all he could do was mutter something about 26th September being the prime date for Yellow-breasted Bunting [*Emberiza aureola*] and an image that, if only it had been captured through his telescope, would surely have resolved into that very species.'

The moral here is that at no time, ever, should one drop one's ornithological guard or equipment.

Conclusion

We do not pretend to have done much more at Rocky than to demonstrate that, as ever, an east Atlantic headland will present an exciting variety of birds and that this will be the richer for dedicated observer effort. Given the amazing mix of rarities that have reached Donegal, our few precious vagrants are not that remarkable, but the convergence of our 1999 records of commoner migrants with those seen earlier in Iceland may be significant. We hope that our results (and narrative) will inspire others to pick little-explored northwestern headlands and enjoy the joyful companionship that comes from shared adventure. To name but two locations, The Mullet and Aranmore await you.



A. McGeehan

59. Melodious Warbler *Hippolais polyglotta* in its favourite Sycamore tree *Acer pseudoplatanus*, Malin Beg, Co. Donegal, 24th September to 10th October 1999.

Postscript for autumn 2000

In 2000, Rocky was manned for 14 days between 9th September and 8th October, and six observers contributed to the fullest autumn cover yet achieved. In the highest total of our six years, 106 species were seen and the Rocky autumn-migrant list grew by four species and one subspecies. Two events added to our understanding of migrations in northwest Ireland.

The first was a convincing 'super drift' of Fennoscandian and Siberian species from 29th September to 2nd October, precipitated by the constant clash of easterly winds and incoming Atlantic fronts. The most telling birds were a Dotterel *Charadrius morinellus* (2nd October), two Jack Snipe (29th September), a 'Grey-headed' Wagtail *Motacilla flava thunbergi* (29th-30th September, the first for Donegal), two Common Redstarts *Phoenicurus phoenicurus* (2nd October), a Reed Warbler *Acrocephalus scirpaceus* (29th September to 3rd October, also one on 11th September), a Barred Warbler *Sylvia nisoria* (1st October), a pale eastern Garden Warbler *S. borin* (1st October), three Yellow-browed Warblers (29th September, and two on 1st October), and one, then two 'Northern' Treecreepers *Certhia f. familiaris* (29th September to 4th October). These were supported by northern forms of Willow Warbler and Common Chiffchaff, another burst of migrant finches such as Brambling and Siskin, and our first vagrant moths from continental Europe, some from as far east as the Balkans.

The second major arrival was of northern wildfowl, on 5th October. Seabirds were unusually scarce, but on that day a spell of sun and a northwest tailwind allowed the arrival throughout the morning and continuing into the afternoon of 670 Barnacle Geese on to Rathlin O'Birne island; five other wildfowl species included our first Greater Scaup *Aythya marila*. In no way could we doubt that they were sentient beings taking immediate advantage of a favourable vector.

Otherwise, we again came up short of an American passerine, but two White-rumped Sandpipers *Calidris fuscicollis* (adult on 17th September, juvenile on 8th October: the first records for Donegal), a Rosy Starling *Sturnus roseus* (juvenile from 9th to 11th September) and a first-winter Common Rosefinch *Carpodacus erythrinus* (17th September) showed once again how the birds of America and Eurasia meet in Donegal.

Acknowledgments

Without the trail-blazing of John O'Boyle and Stephen Foster, and the thoughts of Bruce Mactavish (and news communicated via him from Yann Kobliensson in Iceland), we could well have missed some of our best birdwatching ever. Without the help of Ken Douglas, Andrew Lassey and the Irish Birdline we would have frequently been unaware of unfolding events elsewhere that were of real relevance to our endeavours at Rocky. To the blessed Miriam Kelly goes our gratitude for our free adopted home: her cottage at Glencolmcille. Many thanks are also due to all the garden-owners for thinking us 'mad b*******s' but letting us in all the same. Finally, we are delighted that *British Birds* has allowed us this advertisement for old-fashioned migration study.

References

Gibbs, A., Nisbet, I. C. T., & Redman, D. S. 1954. Birds of North Donegal in autumn 1953. *Brit. Birds* 47: 218-228.

Hutchinson, C. D. 1989. *Birds in Ireland*. Calton.

Kennedy, P. G., Ruttledge, R. F., & Scroope, C. F. 1954. *The Birds of Ireland*. Edinburgh.

Naylor, K. 1996 & 1998. *A Reference Manual of Rare Birds in Great Britain and Ireland*. Vols. 1 & 2. Published by author, Nottingham.

O'Boyle, J. Records from Glencolmcille (from 1986). Private log.

Pettit, R. G. 1959-1966. *Tory Island Bird Reports*. Published by Tory Island Bird Observatory.

Pétursson, G. 1997. Possible future European passerine vagrants to Canada. *Birders Journal* 6 (3): 145-151.

Ruttledge, R. F., *et al. Irish Bird Reports* 1953 to 1997.

Snow, D. W., & Perrins, C. M. (eds.) 1998. *The Birds of the Western Palearctic. Concise Edition*. vol. 1 Non-passerines. Oxford.

Þráinsson, G., Pétursson, G., & Ólafsson, E. Sjaldgæfir fuglar á Íslandi, 1992, 1994. *Bliki* 14: 17–48; 16: 11-45.

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Shearwaters moving past Rocky

Evolution of the Atlantic-island Chaffinches

Martin Collinson



Dan Powell

Common Chaffinch *Fringilla coelebs*, Canaries form.

The Common Chaffinch *Fringilla coelebs* (hereafter referred to simply as the 'Chaffinch') is notoriously variable across its Palearctic range. Cramp & Perrins (1994) divided the species into three distinct groups: the *coelebs* group of continental Eurasia, the *spodiogenys* group of Africa, and the *canariensis* group of the east Atlantic islands, which they suggested might be better regarded as three separate species. When one looks at the plumages of the males, these are indeed three distinct versions of Chaffinch, and many birders who have been to Gran Canaria or Tenerife to see the Blue Chaffinch *F. teydea* must have wondered whether there are, in fact, one or two more species of chaffinch to be ticked off.

The *coelebs* group of some ten races includes *gengleri*, found in Britain & Ireland, and *balearica* of Iberia and the Balearic Islands, while the *spodiogenys* group contains just the two races *africana* (Morocco to northwest Tunisia) and *spodiogenys* (rest of Tunisia and northwest Libya). The *canariensis* group comprises three races on the Canary Islands, namely *canariensis* of Tenerife, Gran Canaria and Gomera, *palmae* of La Palma and *ombriosa* of El Hierro, along with *maderensis* of Madeira and *moreletti* of the Azores. The distributions of the races are shown in fig. 1.

Evolution and variation of the Atlantic-island Chaffinches have been studied previ-



Fig. 1. Ranges of the races of Common Chaffinch *Fringilla coelebs*, adapted from Cramp & Perrins (1994).

Iberian birds are usually given the subspecific name *balearica*, differing from *coelebs* in measurements. This subspecies and the El Hierro form *ombriosa* were not recognised by Marshall & Baker (1999). The *spodiogenys* sample was collected at Nezfa, Tunisia.

ously on the basis of their morphology and behaviour (Grant 1979, 1980; Lynch & Baker 1993), and island populations are thought to have colonised from continental Africa or Europe in the last one million years. Critical to an evaluation of their taxonomic status is an assessment of the number of times the Atlantic islands were colonised from the mainland of Europe or Africa. For example, it would be predicted on the basis of geographical proximity that the Canary Islands are likely to have been colonised from Africa, whereas the Azores Chaffinches are more likely to have originated in Iberia. An alternative possibility is that birds from Africa or Europe originally colonised one of the Atlantic islands, and that this population subsequently expanded to the other islands. The latter scenario would imply that the plumage similarities among the Atlantic forms are due to their close relationships and common ancestor. Otherwise, if there have been two or more separate colonisation events, then we are forced to explain the morphological similarities of the different populations (large body mass, blue dorsal pigmentation, reddish-orange chest, short wings, long tarsi and long bill: Grant 1979) as being the result of convergent evolution in response to the peculiar environmental conditions common to the Atlantic islands. The two possibilities have very different implications for the taxonomic ranking of these forms, but morphological and distributional data alone cannot distinguish which is the more likely.

Genetic data, however, provide a potential means of shedding some light on their evolution. In a recent study, Marshall & Baker (1999) analysed four sequences of mitochondrial DNA (mtDNA) from various races of Chaffinch in order to identify the most likely colonisation history. They reasoned that, if the island forms of the Chaffinch originated as the result of a single colonisation event, followed by radiation to other islands, then it should be possible genealogically to trace all these forms to a single ancestor, so that they form a group which excludes the continental populations. If, on the other hand, there were two or more separate colonisations, we might expect DNA-sequence data to suggest, for example, that *canariensis* is more closely related to *africana* than to *moreletti* from the Azores; and also that it would not be possible to construct, on the basis of DNA, a genealogical tree which groups all the island Chaffinches together to the exclusion of mainland birds.

When Marshall & Baker collected DNA samples from Chaffinches, they found that there was little variation *within* most of the races, so the DNA sequences of representative individuals were fed into the analysis of variation *among* races. However, two different sequences of mtDNA were found in different individuals of both *canariensis* and *maderensis*, so these data were also incorporated (see figs. 2 & 3). Several different methods of resolving the relationships between the races were used (neighbour-joining, maximum-likelihood and parsimony-based analyses), producing five evolutionary trees. Four of the five analyses supported the hypothesis that a single colonisation event had occurred, such as the neighbour-joining tree presented in fig. 2.

A constant result, revealed in all five trees, was that *africana* is closely related to nominate *coelebs*; the two are sister taxa, more closely related to each other than they are to

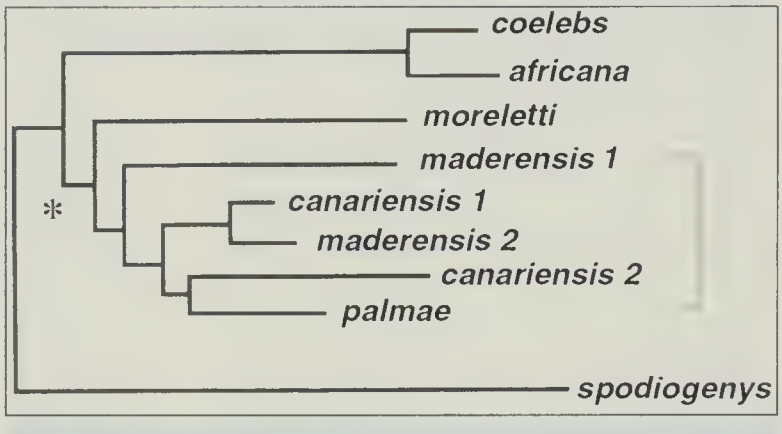


Fig. 2. Representative tree of the relationships between the various races of Common Chaffinch *Fringilla coelebs*.

The different mtDNA sequences found in different individuals of *canariensis* and *maderensis* are labelled arbitrarily '1' and '2'. Exact relationships among *canariensis*, *maderensis* and *palmae* are uncertain (indicated by grey bracket on right). It is possible to trace all the island birds back to a single ancestral, colonising, population (marked by an asterisk) which is separate from the lineage that led to *coelebs* and *africana*.

Redrawn from the neighbour-joining tree of Marshall & Baker (1999), and diagrammatic only; see Collinson (2001) for further explanation of the representation of phylogenetic trees.

any of the island forms, in spite of their very different plumage characteristics. Another constant result was that one of the *canariensis* mtDNAs (1 in fig. 2) clustered with one of the *maderensis* DNAs (2 in fig. 2), to the exclusion of the other *maderensis* and *canariensis* types. Marshall & Baker took this as evidence for some inter-island transfer of genes during the evolutionary history of Chaffinches. Different trees, however, differed in their interpretation of the relationships among the *maderensis*, *canariensis* and *palmae* individuals. What seems to have happened is that the original colonisation of one of the island groups was followed rapidly by radiation to the other islands, such that there was very little time for gene mutations to build up while the archipelagos were being actively colonised. The majority of the genetic differences among *canariensis*, *maderensis* and *palmae* have built up during the period since these forms were each isolated in their own separate ranges. The small number of shared mutations which might provide useful phylogenetic information are lost in the genetic 'noise' that has accumulated since isolation.

One tree (fig. 3), however, differed from the others in placing the divergence of the Azores birds, *moreletti*, near the base of the tree. Using this tree, it is no longer possible to trace all the island Chaffinches back to a single ancestor without also including the continental populations. It suggests early colonisation of the Azores by an ancestral chaffinch-type, followed by a later colonisation of the other islands by a common ancestor of the *coelebs/africana* birds. Although this tree is 'outvoted' 4:1 by the other trees, this does not necessarily mean that it is wrong; it could simply be the result of a more accurate methodology. Marshall & Baker used spectral analysis (a mathematical means of quantifying the amount of support and conflict for each proposed branching point in such a tree) to show that the 'multiple-colonisation' result arose largely because of the weighting given to a mutation in a 'hotspot' (sequence of DNA where the mutation rate is higher than in surrounding sequences). It is very doubtful that this is a valid weighting, and the authors concluded that, although polyphyly (descent from more than one ancestral race) cannot be completely eliminated, it is much less likely than the alternative hypothesis, that all Atlantic-island Chaffinches arose from a single ancestral colonising population.

The genetic evidence is supported by studies of song patterns, measurements and protein polymorphisms. If we accept a rate of DNA divergence of 2% per million years per lineage as a rough calibration (Shields & Wilson 1987), then the ancestors of *moreletti* colonised the Azores approximately 600,000 years ago (presumably from Iberia), this being followed by rapid colonisation of Madeira and the Canary Islands. Although the phylogenetic trees could not resolve whether Madeira or the Canary Islands were colonised first, Madeira is geo-

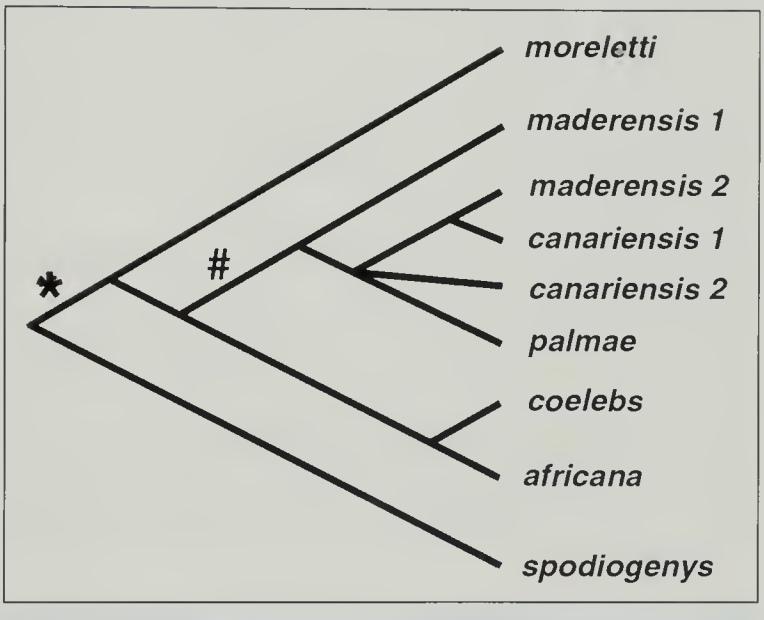


Fig. 3. A 'dissenting' tree which suggests at least two colonisation events by chaffinches *Fringilla*.

This tree, which fell out of a different analysis, has the Azores form (*moreletti*) separating from the ancestral lineage of chaffinches very early in its evolutionary history. In this case, the common ancestor of all island chaffinches (*) also gave rise to *coelebs* and *africana*. It suggests that, after chaffinches reached the Azores, a later-colonising lineage (indicated by #) which split off from continental chaffinches was the common ancestor of *palmae*, *canariensis* and *maderensis*.

Redrawn from Marshall & Baker (1999), who thought this tree to have been an artefact of the particular analysis technique (parsimony with transversion weighting), and therefore not likely faithfully to represent chaffinch evolution.

graphically the closer of the two to the Azores.

What does this mean with regard to Chaffinch systematics? As Marshall & Baker state, it is clear that the plumage similarities exhibited by the Chaffinches inhabiting the various east Atlantic islands are a result of these populations being descended from a common group of ancestors that colonised the Azores, and not the result of convergent evolution in response to similar island habitats. With the benefit of hindsight this is not surprising, since the Atlantic islands are in fact very different from one another in terms of, for example, climate and ecological pressures, and one would not expect any significant selection pressures operating on Chaffinches from different islands that would push these geographically separated populations into the evolving of a common morphology.

Summary and comment

European *coelebs* appears to be closely related to *africana*. This does not, of course, preclude the possibility that the two belong to different species. The big surprise, however, is that *africana*'s neighbour, the morphologically similar *spodiogenys*, is genetically divergent. A *spodiogenys* mtDNA sequence was found in a previous study to be intermediate between that of other Chaffinches and that of the Blue Chaffinch. If, as has been proposed, *africana* Chaffinches were to be split from *coelebs* because they are 'obviously different', then it is uncertain that *spodiogenys* could be uncritically included in the same species as *africana*, even though it is 'obviously similar'. This is a cautionary tale for the 'if it looks different, split it' band of birder-taxonomists.

It should also be noted that the study does not *prove* anything. For example, the evolution of these Chaffinches has taken place against a background of seven or eight glacial and interglacial periods, and there is any number of reasons why several colonisation and extinction events may have taken place which left no trace in the limited number of genes examined in this study. If there were ever short periods of extensive gene flow among the different Chaffinch races, then we might get a false picture of the length of time which has elapsed since these races first diverged. On the basis of the available genetic evidence, however, the most likely scenario outlined by Marshall & Baker, which involves fewest assumptions and guesses, is as follows:

1. The *spodiogenys* haplotype, from Nezfa, Tunisia, is the remnant of an ancestral lineage linking Chaffinch with Blue Chaffinch.
2. About 600,000 BP, ancestral Chaffinches colonised the Azores, presumably from Iberia.
3. Shortly afterwards, a glacial period pushed all or part of these populations out of Iberia, with subsequent recolonisation from Africa during the interglacial (this would explain why *africana* and *coelebs* are so closely related).
4. Chaffinches quickly radiated out from the Azores, to Madeira and the Canary Islands, forming different subspecies as a result of founder effects, or natural selection, or both. On Gran Canaria and Tenerife, they would have met the Blue Chaffinch, the product of an earlier invasion (it has been suggested that the smaller, narrower bill of *canariensis* Chaffinches is a result of character displacement which avoids niche overlap with Blue Chaffinch).

References

Collinson, M. 2001. Shifting sands: taxonomic changes in the world of the field ornithologist. *Brit. Birds* 94: 2-27.

Cramp, S., & Perrins, C. M. (eds.) 1994. *The Birds of the Western Palearctic*. Vol. 7. Oxford.

Grant, P. R. 1979. Evolution of the Chaffinch, *Fringilla coelebs*, on the Atlantic Islands. *Biol. J. Linn. Soc.* 11: 301-332.

Grant, P. R. 1980. Colonisation of Atlantic Islands by chaffinches (*Fringilla* spp.). *Bonn. Zool. Beitr.* 31: 3-4.

Lynch, A., & Baker, A. J. 1993. A population memetics approach to cultural evolution in chaffinch song: meme diversity within populations. *Am. Nat.* 141: 597-620.

Marshall, H. D., & Baker, A. J. 1999. Colonization history of Atlantic Island Chaffinches (*Fringilla coelebs*) revealed by mitochondrial DNA. *Mol. Phyl. Evol.* 11: 201-212.

Shields, G. F., & Wilson, A. C. 1987. Calibration of mitochondrial DNA evolution in geese. *J. Mol. Evol.* 24: 212-217.

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The European Bird Report

Non-passerines

Compiled by Colin Davies

from information supplied by National Correspondents

ABSTRACT This biannual feature, started 24 years ago (see *Brit. Birds* 70: 218), provides the only reliable, continent-wide report on population trends and significant, nationally accepted records of rarities.

Some of the highlights in this forty-eighth compilation include:

- First West Palearctic record of **Herald Petrel** *Pterodroma arminjoniana*
- First **Swinhoe's Storm-petrel** *Oceanodroma monorhis* in Norway
- First **Red-billed Tropicbird** *Phaethon aethereus* in Portugal (Madeira)
- Record numbers of **Pygmy Cormorants** *Phalacrocorax pygmeus* in Bulgaria, and first two records for Switzerland, all in 2000
- First breeding for 60 years by **White Pelicans** *Pelecanus onocrotalus* in Bulgaria
- First breeding since 1668 by **Eurasian Spoonbills** *Platalea leucorodia* in Great Britain
- Record numbers of **Greater Flamingos** *Phoenicopterus ruber* reared in France in 1998
- Six **Griffon Vultures** *Gyps fulvus* together in Netherlands in 1998
- First **Short-toed Eagle** *Circaetus gallicus* in Great Britain
- First breeding by **Golden Eagles** *Aquila chrysaetos* in Denmark
- Influx of **Allen's Gallinules** *Porphyrula alleni* in Canary Islands in 1999
- First **Collared Pratincole** *Glareola pratincola* in Iceland
- First breeding by **White-tailed Lapwings** *Vanellus leucurus* in Armenia, followed by influx and seven nests in Romania
- First **Red-necked Stint** *Calidris subminuta* in Ireland
- Eight **Pectoral Sandpipers** *Calidris melanotos* in Hungary in autumn 1999
- Unexpectedly high breeding numbers of **Great Snipe** *Gallinago media* in Latvia in 1999
- First twentieth-century record of **Willet** *Catoptrophorus semipalmatus* in France

- First **Elegant Tern** *Sterna elegans* in Denmark
- First **Bridled Tern** *Sterna anaethetus* in Germany and second in Denmark, both in 1999
- First three **Oriental Cuckoos** *Cuculus saturatus* in Finland
- Major irruption of **northern owls** in Sweden and Denmark in autumn 1999
- First **Common Nighthawk** *Chordeiles minor* in France
- Influx of **Chimney Swifts** *Chaetura pelagica* in 1999: first four records for Ireland and first for Sweden
- First breeding by **White-backed Woodpeckers** *Dendrocopos leucotos* in Switzerland

Data are supplied for the EBR by a network of National Correspondents (see page 141) appointed by each country, and are also extracted from published reports of verified records. A few entries (always marked with an asterisk) are still subject to assessment by the relevant rarities committee (and will be either confirmed or deleted in a future EBR), but all others are accepted, verified records.

While this Report covers the whole of Europe, records notified by the National Correspondents for nearby countries within the Western Palearctic are also included. This forty-eighth compilation, covering non-passerines, includes officially notified records from 33 countries.

This Report aims to include *all* records of:

1. Significant breeding-range expansions or contractions.
2. Major irruptions of erupting species.
3. Asiatic vagrants.
4. Nearctic species (excluding ducks, waders and gulls in Great Britain and Ireland, where they are regular, except for those covered by point 6).
5. Other extralimital vagrants.
6. Major national rarities, including the first five national records, even if the species is common elsewhere in Europe.

Unless otherwise stated, all records refer to nationally accepted records of single individuals.

Black-throated Diver *Gavia arctica*

PORTUGAL First record: two at Aveiro on 27th December 1997 (*Pardela* 11: 5).

White-billed Diver *Gavia adamsii*

ESTONIA First to fifth records: adult at Pööpsaspea neem, Noarootsi, on 10th October 1992; then 12th May 1994, 13th May 1994, 14th May 1994, and 19th May 1996 (four subsequent records; *Hirundo* 12: 61).

Pied-billed Grebe *Podilymbus podiceps*

NETHERLANDS Second record: adult on 1st-10th January 1998 (*Dutch Birding* 21: 313).

Slavonian Grebe *Podiceps auritus*

ITALY First record for Sardinia: 11th October 1998 (*Aves Ichnusae* 2: 69).

Black-browed Albatross *Diomedea melanophris*

DENMARK Third record: immature at sea 17 km northwest of Hanstholm, N-Jutland, on 20th July 1999*.

Fulmar *Fulmarus glacialis*

CANARY ISLANDS Second record: Tenerife in March 1998*.

DENMARK First breeding: two pairs at Bulbjerg, N-Jutland, in 1998 (*DOFT* 93: 106).

Herald Petrel *Pterodroma arminjoniana*

PORTUGAL First record for Western Palearctic: Ilha de Pico, Azores, on 18th July 1997 (*Pardela* 11: 5).



Dan Powell

Fig. 1. Red-billed Tropicbird *Phaethon aethereus*.

Cory's Shearwater *Calonectris diomedea*

IRELAND Large influx: almost 7,000 sightings involving at least 4,000 birds, mainly from the southwest coast, in August 1999.
NORWAY Fifth record: 22nd July 1995 (*Fugleåret* 2: 7).
POLAND Second record: 12th September 1998 (*Notatki Orn.* 41: 30).

Sooty Shearwater *Puffinus griseus*

GERMANY Second biggest influx ever: 188 at Heligoland on 18th October 1998 and 51 at Wangerooge/Niedersachsen on 9th October 1998 (largest influx ever was in 1996).

Manx Shearwater *Puffinus puffinus*

GERMANY Highest number in twentieth century: 13 at Heligoland between 12th and 25th October 1998.

Wilson's Storm-petrel *Oceanites oceanicus*

FRANCE Vagrant: 10th October 1998 (*Ornithos* 6: 146).

Swinhoe's Storm-petrel *Oceanodroma monorhis*

NORWAY First record: Rogaland on 13th August 1996 (*Fugleåret* 3: 6).

Red-billed Tropicbird *Phaethon aethereus*

PORTUGAL First record: Madeira on 22nd July 1997 (*Pardela* 11: 7).

Northern Gannet *Morus bassanus*

FRANCE Breeding census: 14,314 pairs in 1998 (*Ornithos* 7: 2).
GERMANY Breeding census: on Heligoland, 38 pairs in 1998 and 67 pairs in 1999 (first breeding was in 1991: *Brit. Birds* 88: 26).
LATVIA Fifth record: adult at Pape on 4th November 1999*.
POLAND Vagrant: 12th August 1998 (eight previous records; *Notatki Orn.* 41: 31).
SWITZERLAND Second record: 22nd June 2000.

Pygmy Cormorant *Phalacrocorax pygmeus*

BULGARIA Largest midwinter numbers ever and unusually high breeding numbers: 11,805 during midwinter count, organised by the Bulgarian Society for the Protection of Birds/BirdLife Bulgaria, in January 2000; over 250 pairs at Srebarna Reserve near River Danube (*BSPB National Bird Data Bank*).
HUNGARY Breeding census: 100 pairs bred in five colonies on the Hortobágy in 1999.
SWITZERLAND First and second records: 5th

October 2000 and 6th October 2000 at Rällikerried/Uster, and 13th-15th October 2000 at Klingnauer Stausee.

White Pelican *Pelecanus onocrotalus*

BULGARIA First breeding for 60 years: pair bred in colony of 2,000 Dalmatian Pelicans *P. crispus* at Srebarna Reserve (*BSPB National Bird Data Bank*).

Dalmatian Pelican *Pelecanus crispus*

BULGARIA Midwinter count: 539 individuals throughout the country in January 2000 (*BSPB National Bird Data Bank*).
HUNGARY Vagrant: 7th-10th July 1998 (nine previous records; *Túzok* 4: 107).

Magnificent Frigatebird *Fregata magnificens*

GREAT BRITAIN Second record: female taken into care on 22nd December 1998 and died in October 1999 on Isle of Man (*Brit. Birds* 93: 516-517).

Little Bittern *Ixobrychus minutus*

FRANCE Breeding census: 217 pairs in 1998 (*Ornithos* 7: 15).

Night Heron *Nycticorax nycticorax*

FINLAND Vagrant: 12th June 1998 (five previous records; *Linnut* 34: 27).

Cattle Egret *Bubulcus ibis*

HUNGARY Vagrant: 30th-31st May 1998 (11 previous records; *Túzok* 4: 108).

Little Blue Heron *Hydranassa caerulea*

PORTUGAL Second record: Ilha de S. Jorge, Azores, between 7th and 9th October 1997 (second record for Western Palearctic; *Pardela* 11: 7).

Little Egret *Egretta garzetta*

BELARUS Fifth record during past 50 years: three near River Pripyat, Zhitkovichi, Gomel, on 13th August 1999.
POLAND Probable first breeding: 1998 (*Notatki Orn.* 41: 31-32).

Great White Egret *Egretta alba*

CYPRUS Exceptional numbers in autumn: 33 on 22nd September 1999 (*Cyprus Annual Report* 16: 17).
IRELAND Fifth to ninth records: Rahasane Turlough, Co. Galway, 1st-3rd May 1998; Strangford Lough, Co. Down, between 25th November and 6th December 1998; South Slob, Co. Wexford, 5th May 1999; Dromore, Co. Clare, 7th October 1999; and Shannon Callows, Co. Roscommon, 27th October 1999 (eight records have been since 1997).
SWITZERLAND Midwinter counts: 26 at Lake Neuchâtel on 7th January 1998 and 29 at the same location on 28th December 1998 (*Orn. Beob.* 96: 265).

Purple Heron *Ardea purpurea*

BELARUS Fourth record during past 30 years: Zhitkovichi, Gomel, on 13th August 1999.

White Stork *Ciconia ciconia*

DENMARK Breeding census: three pairs fledged nine young in 1998 (*DOFT* 93: 107) and two pairs fledged three young in 1999 (*DOFT* 94: 56).
FRANCE Breeding census: 257-259 pairs in 1998 (*Ornithos* 7: 3).

Eurasian Spoonbill *Platalea leucorodia*

ARMENIA Highest count since 1928: 15, in mixed flock with Greater Flamingos *Phoenicopterus ruber*, at Armash fishponds on 30th July 2000.
DENMARK Breeding census: three pairs in 1999 (*DOFT* 94: 56).
ESTONIA Fourth record: 10th September 1995 (*Hirundo* 12: 61).
FINLAND Influx: 34 in autumn 1998 (eight previous records; *Linnut* 34: 27).
FRANCE Breeding census: 73 pairs in 1998 (*Ornithos* 7: 3).
GERMANY Increase in breeding numbers: 14 breeding pairs in 1999, following colonisation in 1996, and maximum of 160 individuals in September 1999.
GREAT BRITAIN Breeding: pair in England fledged two young in 1999 (first breeding since 1668; *Brit. Birds* 93: 364).
MOROCCO Fourth and fifth breeding records: 12 pairs bred in 1999 and 15 pairs in 2000, in a colony of tree-nesting herons (mainly Cattle Egrets *Bubulcus ibis*).

Greater Flamingo *Phoenicopterus ruber*

FRANCE Breeding census: 16,700 pairs raised a record 10,500 young in 1998

(*Ornithos* 7: 3).
ITALY Breeding census: 15,400 pairs reared 10,700 young in Sardinia between 1993 and 1999 (*Aves Ichnusae* 2: 3-43).

Lesser Flamingo *Phoenicopterus minor*
CANARY ISLANDS Vagrant/escape: immature on Tenerife in October 1999*.

Mute Swan *Cygnus olor*
CROATIA Range expansion: 70-100 pairs in 2000 (ten pairs in 1995).

Tundra Swan *Cygnus columbianus*
ESTONIA First and second records of race *columbianus* (Whistling Swan): Haeska, Martna, on 10th November 1990 and on 16th April 1995 (*Hirundo* 12: 62).

Whooper Swan *Cygnus cygnus*
BELARUS Second breeding record: two or three pairs in Hoiniki, Gomel, in 1998 (*Subbuteo* 2, no. 1).

White-fronted Goose *Anser albifrons*
MALTA Vagrant: November 1999* (first for 24 years).

Barnacle Goose *Branta leucopsis*
DENMARK Breeding census: 62 pairs in 1999 (*DOFT* 94: 57).

Brent Goose *Branta bernicla*
DENMARK Vagrants of race *nigricans*: 27th April 1998, 30th September to 27th November 1998, and 15th November 1998 (*DOFT* 93: 129-130).
ICELAND Fifth record of race *nigricans*: 16th May 1997 (*Bliki* 21: 39).
POLAND First record of race *nigricans*: 31st October to 8th November 1998 (*Notatki Orn.* 41: 33).

Red-breasted Goose *Branta ruficollis*
UKRAINE Count: 13,000 wintering on Syvash (eastern coast of Crimea) in January 2000.

Egyptian Goose *Alopochen aegyptiacus*
SWITZERLAND Deletion: record on 1st June 1998 (*Brit. Birds* 93: 118) should have been listed under Egyptian Vulture *Neophron percnopterus*.

Ruddy Shelduck *Tadorna ferruginea*
BELARUS Second record: male shot on 20th January 1992 in Pukhovichi district, Minsk (*Russki ornitologicheski zhurnal* 1994, 3: 59-70).
PORTUGAL Vagrants: nine on 2nd October 1998 (*Pardela* 11: 8).
SWITZERLAND Large concentrations of escapes/vagrants: 59 at Klingnauer Stausee on 29th November 1997 and 87 at same location on 1st October 1998 (*Orn. Beob.* 96: 266).

Common Shelduck *Tadorna tadorna*
SWITZERLAND First and second breeding records: one pair at Klingnauer Stausee and a second at Genf in 1998 (*Orn. Beob.* 96: 259).

Mandarin Duck *Aix galericulata*
ICELAND Vagrants: two in 1997 (six previous records; *Bliki* 21: 39).

Eurasian Wigeon *Anas penelope*
DENMARK Breeding census: two pairs in 1999 (*DOFT* 94: 57).

American Wigeon *Anas americana*
DENMARK Vagrant: 8th-12th April 1998 (*DOFT* 93: 130).

Green-winged Teal *Anas carolinensis*
HUNGARY First record: 17th-19th April 1998 (*Túzok* 4: 108).
NETHERLANDS Vagrant: 9th May 1998 (*Dutch Birding* 21: 313).
SWITZERLAND First record: Vogelraupfi/Bannwil on 30th-31st March and again on 2nd April 2000.

Black Duck *Anas rubripes*
NORWAY Second record: 5th March to 2nd June 1995 (*Fugleåret* 2: 10).

Blue-winged Teal *Anas discors*
DENMARK Vagrant: two males at Fjaltring Strand, W-Jutland, on 17th-19th April 2000* (12 previous records).
ICELAND Vagrants: two in 1997 (nine previous records; *Bliki* 21: 40).
NETHERLANDS Deletion: 18th February 1995 (*Brit. Birds* 91: 41; *Dutch Birding* 21: 313).
NORWAY Third record: 30th May 1996 (*Fugleåret* 3: 9).

SWITZERLAND Fifth record: Häusernmoos on 6th May 2000.

Marbled Duck *Marmaronetta angustirostris*

BULGARIA Fifth record: Koshava, Vidin District, River Danube, on 14th January 2000 (*BSPB National Bird Data Bank*).
MOROCCO New breeding sites: at least two pairs south of El Jadida in 1998 and 16 pairs north of Casablanca in spring 1999.

Red-crested Pochard *Netta rufina*

SWITZERLAND Record breeding numbers and increasing winter visitor: 96-97 pairs bred in 1998, and 14,594 individuals counted in January 1998 (*Orn. Beob.* 96: 258-259, 266).

Ring-necked Duck *Aythya collaris*

DENMARK Vagrant: male at Silkeborg, E-Jutland, on 13th-19th April 2000* (five previous records).
FINLAND Fourth record: 14th May to 2nd July 1998 (*Linnut* 34: 28).

Lesser Scaup *Aythya affinis*

CANARY ISLANDS Vagrants: Tenerife from November 1999 to March 2000, and Gran Canaria from December 1999 to February 2000*.
IRELAND Fifth record: North Slob, Co. Wexford, between 25th January and 13th March 1998.

Common Eider *Somateria mollissima*

FRANCE Breeding status: 11 pairs in 1998 (*Ornithos* 7: 4).
HUNGARY Autumn influx: several juveniles and some adult females, mostly singles, but including flocks of up to 12, between August and December 1999.

Steller's Eider *Polysticta stelleri*

ICELAND Vagrant: 20th May to 1st June 1997 (seven previous records; *Bliki* 21: 41).
LATVIA Probable new wintering site: eight at Akmeòrags, Liepâja, and another four just north of there in January 2000.

Harlequin Duck *Histrionicus histrionicus*

NORWAY Fourth record: 21st June 1991 (*Fuglearet* 2: 10).

Common Scoter *Melanitta nigra*

FINLAND First record of race *americana*: adult on 3rd May 1998 at Inkoo, Sommarö (*Linnut* 34: 29).

Surf Scoter *Melanitta perspicillata*

GERMANY Fourth record: male at Dassower See/Schleswig-Holstein during 13th February to 22nd March 1999*.

Bufflehead *Bucephala albeola*

FRANCE Third record: Cantal on 5th November 1998 (*Ornithos* 6: 148).
IRELAND First record: female at The Gearagh, Co. Cork, during 18th January to 8th March 1998.

Common Goldeneye *Bucephala clangula*

DENMARK Breeding census: 64-67 pairs in 1999 (*DOFT* 94: 58).
SWITZERLAND Second and third breeding records: 1997 and 1998 (*Orn. Beob.* 96: 259).

Smew *Mergellus albellus*

BELARUS Third record in past 40 years: two adult females in Minsk during winter 1995/96.

Red-breasted Merganser *Mergus serrator*

FRANCE Breeding status: one pair in 1998 (*Ornithos* 7: 4).
SWITZERLAND Third breeding record: family party with two young in 1998 (*Orn. Beob.* 96: 261).

Goosander *Mergus merganser*

CROATIA First breeding record: five to ten pairs on the River Cetina in 2000.
DENMARK Breeding census: 30 pairs in 1999 (*DOFT* 94: 58).
PORTUGAL First record: Viana de Castelo on 3rd February 1997 (*Pardela* 11: 10).

Ruddy Duck *Oxyura jamaicensis*

AUSTRIA Third record: 10th January 1998 (*Egretta* 43: 55).
FINLAND Vagrant: 27th June 1999 (14 previous records).
HUNGARY Second and third records: Miklósfa fishponds on 8th November 1998*, and Tata, Öregtó, on 29th October 1999*.

ICELAND Vagrants: two in 1997, but no breeding recorded (*Bliki* 21: 42).

White-headed Duck *Oxyura leucocephala*

BULGARIA Census totals: 670 on 7th February 2000 and 1,120 on 5th March 2000 at main wintering site of Lake Vaya (*BSPB National Bird Data Bank*).
GERMANY Vagrant: female at Stuttgart/Baden-Württemberg on 28th-29th November 1999*.
NETHERLANDS Vagrant: 17th January to 14th February 1998 (12 previous records; *Dutch Birding* 21: 310).

Black-shouldered Kite *Elanus caeruleus*

FRANCE Breeding status: four pairs in 1998 (*Ornithos* 7: 5).
NETHERLANDS Second record: adult at Eierlandse Duinen, Noord-Holland, on 29th-31st March 1998 (first was in Flevoland on 31st May 1971; *Dutch Birding* 21: 313).

Black Kite *Milvus migrans*

IRELAND Fifth record: 21st June 1989.

Red Kite *Milvus milvus*

ARMENIA Second record: four at Tsovagyugh on 22nd April 2000 (first was at Voghjaberd in 1949).
DENMARK Breeding census: 22-29 pairs in 1999 (*DOFT* 94: 58).
ICELAND First record: mid December 1997 to mid September 1999, when found oiled by Fulmar *Fulmarus glacialis*, and later returned to Scotland, where it had been ringed and wing-tagged as a juvenile in July 1997 (*Bliki* 21: 42).

White-tailed Eagle *Haliaeetus albicilla*

DENMARK Breeding census: six pairs in 1999 (*DOFT* 94: 59).

Lammergeier *Gypaetus barbatus*

FRANCE Breeding status: 31 pairs raised seven young in 1998 (*Ornithos* 7: 5).

Egyptian Vulture *Neophron percnopterus*

ESTONIA First record: immature at Pässaste, Halliste, on 30th June 1990 (*Hirundo* 12: 68).
HUNGARY Vagrant: January 1998 (five previous records; *Túzok* 4: 108).
MOROCCO Large decline: no breeding record since 1995 (population in early 1980s estimated to be in range 500-1,000 pairs).
SWITZERLAND Vagrant: 1st June 1998 (*Ora. Beob.* 96: 162).



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60. White-headed Duck *Oxyura leucocephala*, Stuttgart, Germany, November 1999.

Griffon Vulture *Gyps fulvus*

FINLAND Vagrant: one ringed in Israel was seen in Eno, eastern Finland, on 10th June 1999 (and found dead on 28th June 1999).
NETHERLANDS Vagrant: six in Zeeland on 25th June 1998, the first record of two or more together since 1945 (*Dutch Birding* 21: 314).

Monk Vulture *Aegypius monachus*

FRANCE Breeding status: five or six pairs in 1998 (*Ornithos* 7: 5).

Short-toed Eagle *Circaetus gallicus*

GREAT BRITAIN First record: 7th-11th October 1999 (*Brit. Birds* 93: 526).
NORWAY First record: 18th July 1988 (*Fugleåret* 2: 11).

Pallid Harrier *Circus macrourus*

ARMENIA Large numbers: 17 in Tsovagyugh during 15th-30th April 2000.
BELARUS Third record since 1940: adult male at Tulgovichi, Hoiniki, Gomel, on 7th April 1996 (first two were in 1992 and 1994).
FINLAND Influx: 29 in 1998 (*Linnut* 34: 29).

Montagu's Harrier *Circus pygargus*

DENMARK Breeding census: 34-45 pairs in 1999 (*DOFT* 94: 59).

Long-legged Buzzard *Buteo rufinus*

FRANCE Vagrant: adult of race *cirtensis* during 24th December 1997 to 18th March 1998 (*Ornithos* 6: 150).
GERMANY Vagrant: first-year at Holzleuten/Baden-Württemberg during 26th September to 8th November 1998*.
SWITZERLAND Vagrant: 4th October 1999.

Spotted Eagle *Aquila clanga*

ESTONIA Breeding census: estimated 15-20 pairs during 1990-97, and four instances of hybridisation with Lesser Spotted Eagle *A. pomarina* (*Hirundo* 12: 69-70).
ITALY Fourth record for Sardinia: 17th January 1998 (*Aves Ichnusae* 2: 79).

Steppe Eagle *Aquila nipalensis*

ESTONIA First record: adult at Spithami, Noarootsi, on 15th-16th May 1993 (*Hirundo* 12: 70).
ITALY Fourth record for Sardinia: 10th January 1999 (*Aves Ichnusae* 2: 75).
NORWAY Vagrant: 28th July 1994 (*Fugleåret* 2: 12).
POLAND Vagrants: 21st May 1997 and 30th May 1998 (*Notatki Orn.* 41: 35).

Eastern Imperial Eagle *Aquila heliaca*

CZECH REPUBLIC Second breeding record: pair bred successfully in southern Moravia in 1999 (first breeding was in 1998: *Brit. Birds* 92: 69).
SWEDEN Vagrant: Falsterbo, Skåne, on 16th October 1999.

Golden Eagle *Aquila chrysaetos*

DENMARK First breeding record: pair raised two young in N-Jutland in 1999 (*DOFT* 94: 59).

Booted Eagle *Hieraaetus pennatus*

PORTUGAL First record for Madeira: 21st March 1998 (*Pardela* 11: 10).

Bonelli's Eagle *Hieraaetus fasciatus*

FRANCE Breeding census: 24 pairs raised 15 young in 1998 (*Ornithos* 7: 6).

Osprey *Pandion haliaetus*

DENMARK Breeding census: six to eight pairs in 1999 (*DOFT* 94: 60).
FRANCE Breeding census: 32 pairs raised 35 young in 1998 (*Ornithos* 7: 6).

Lesser Kestrel *Falco naumanni*

ARMENIA New breeding site: colony of 15-20 pairs in old building at Spandarian village on 30th May 2000.
FRANCE Breeding census: 50 pairs raised 92 young in 1998 (steady increase from just seven pairs in 1991; *Ornithos* 7: 6).

Hobby *Falco subbuteo*

DENMARK Breeding census: five or six pairs in 1999 (*DOFT* 94: 60).

Eleonora's Falcon *Falco eleonorae*

SWEDEN Vagrant: Eckelsudde, Öland, on 14th October 1999.

Saker Falcon *Falco cherrug*

FRANCE Vagrants: immature on 21st August 1998, and juvenile during 29th December 1998 to 20th February 1999 (*Ornithos* 6: 151).

GERMANY Breeding: pair in Sachsen in 1997-99, but no young fledged owing to predation by Eagle Owl *Bubo bubo*.

Gyr Falcon *Falco rusticolus*

NETHERLANDS Vagrant: immature of white morph in Friesland during 24th-30th March 1998 (five previous records; *Dutch Birding* 21: 314).

Black Grouse *Tetrao tetrix*

DENMARK Breeding census: no breeding pairs in 1999 (*DOFT* 94: 60).

Common Quail *Coturnix coturnix*

DENMARK Breeding census: at least 140 singing males and two breeding pairs in 1999 (*DOFT* 94: 61).

Spotted Crake *Porzana porzana*

DENMARK Breeding census: 117-121 singing males in 1999 (*DOFT* 94: 61).

Sora Crake *Porzana carolina*

IRELAND Second record: adult at Tacumshin, Co. Wexford, on 2nd-4th August 1998.

Little Crake *Porzana parva*

FRANCE Breeding status: seven pairs in 1998 (*Ornithos* 7: 7).

Baillon's Crake *Porzana pusilla*

FRANCE Breeding status: three pairs in 1998 (*Ornithos* 7: 7).

Corn Crake *Crex crex*

DENMARK Breeding census: at least 200 singing males and one confirmed pair in 1999 (*DOFT* 94: 60).
FRANCE Breeding status: 1,140-1,282 singing males in 1998 (*Ornithos* 7: 14).

Allen's Gallinule *Porphyrula alleni*

CANARY ISLANDS Influx of vagrants: adult and juvenile on Tenerife and juvenile on El Hierro during November and December 1999*.

Common Crane *Grus grus*

CANARY ISLANDS First record: three on Fuerteventura from December 1999 to January 2000*.
DENMARK Breeding census: 16 pairs in 1999 (*DOFT* 94: 62).
FRANCE Breeding status: two pairs in 1998 (*Ornithos* 7: 7).

Demoiselle Crane *Anthropoides virgo*

CYPRUS Large count: 200 on 1st September 1999 (*Cyprus Annual Report* 46: 32).

Little Bustard *Tetrax tetrax*

HUNGARY Vagrant: adult at Mosonszolnok on 24th-26th June 1999* (only the third record in recent decades of this former breeding species).

Oystercatcher *Haematopus ostralegus*

GREAT BRITAIN Population estimate: 36,200 pairs in Scotland in 1998 (*Scot. Birds* 20: 73-80).

Black-winged Stilt *Himantopus himantopus*

ESTONIA First record: adult male at Paljassaare, Tallin, on 11th May 1997 (*Hirundo* 12: 71).
FINLAND Third to fifth records: 11th May 1998 (*Linnut* 34: 30), 13th-15th May 1999, and 27th May 1999.
GERMANY Influx: April-May 1999, with several pairs remaining to breed*.

Avocet *Recurvirostra avosetta*

MOROCCO High winter numbers: 16,300 at Merja Zerga on 16th January 2000.

Stone-curlew *Burhinus oedicnemus*

ESTONIA Fourth and fifth records: 18th July 1990, and 31st May 1995 (*Hirundo* 12: 71).
NORWAY Vagrant: 28th May to 1st June 1995 (six previous records; *Fuglearet* 2: 12).

Cream-coloured Courser *Cursorius cursor*

PORTUGAL Fourth and fifth records: 7th-25th August 1997, and 11th March 1998 (*Pardela* 11: 10).

Collared Pratincole *Glareola pratincola*

FINLAND Vagrant: 26th October 1998 (six previous records; *Linnut* 34: 30).
FRANCE Breeding status: 20-28 pairs in 1998 (*Ornithos* 7: 8).
ICELAND First record: 7th June 1997 (*Bliki* 21: 43).



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Fig. 2. Collared Pratincole *Glareola pratincola.*

POLAND Vagrant: 3rd August 1998 (eight previous records; *Notatki Orn.* 41: 37).

Black-winged Pratincole *Glareola nordmanni*

HUNGARY Vagrants: 19th June 1996 and 11th July 1997 (seven previous records; *Túzok* 4: 109).

Killdeer Plover *Charadrius vociferus*

PORTUGAL First record: Azambuja, Lisbon, on 28th February 1998 (*Pardela* 11: 8).

Kittlitz's Plover *Charadrius pecuarius*

MOROCCO Third record: south of Zagora on 1st March 1999*.

Kentish Plover *Charadrius alexandrinus*

DENMARK Breeding census: 95-105 pairs in 1999 (*DOFT* 94: 63).

Greater Sand Plover *Charadrius leschenaultii*

DENMARK Second record: Margrethe Kog, S-Jutland, on 25th-26th July 2000*.

Caspian Plover *Charadrius asiaticus*

MALTA Vagrant: June 2000* (six previous records).

Dotterel *Charadrius morinellus*

CZECH REPUBLIC Fourth breeding record in twentieth century: pair with three small young in Krkonose Mountains in 1999.

FRANCE Breeding status: one pair in 1998 (*Oruithos* 7: 8).

American Golden Plover *Pluvialis dominica*

ICELAND Vagrant: 4th October 1997 (ten previous records; *Bliki* 21: 43).

MOROCCO Second record: Souss estuary on 16th-17th May 1999*.

NETHERLANDS Vagrant: 20th-24th September 1998 (*Dutch Birding* 21: 314).

NORWAY First record: 12th July 1995 (*Fugleåret* 2: 12).

PORTUGAL Second and third records: 11th-14th October 1997, and 29th October 1998 (*Pardela* 11: 11).

Pacific Golden Plover *Pluvialis fulva*

DENMARK Vagrant: 22nd-25th July 1998 (*DOFT* 93: 132).

ESTONIA First to third records: 18th August 1996, 9th-10th September 1996, and 21st September 1996 (*Hirundo* 12: 72).

FRANCE Vagrants: 9th-14th August 1995, 26th April 1998, and 16th-18th August 1998 (*Oruithos* 6: 152).

NETHERLANDS Vagrant: 18th July to 3rd August 1998 (*Dutch Birding* 21: 314).

NORWAY Vagrant: 8th-9th July 1992 (*Fugleåret* 2: 12).

European Golden Plover *Pluvialis apricaria*

DENMARK Breeding census: four to six pairs in 1999 (*DOFT* 94: 63).

Sociable Lapwing *Vanellus gregarius*

DENMARK Third record: adult at several sites between Gilleleje and Hillerød, Zealand, from 29th June to end of July 2000*, the first for 70 years.
IRELAND Fourth record: Shannon Harbour, Co. Clare, on 18th December 1998.
PORTUGAL Second and third records: 11th December 1997, and 27th February 1998 (*Pardela* 11: 11).
SWITZERLAND Vagrants: 8th-13th April 2000 at Bellechasse/Sugiez, and 3rd October 2000 at Kerzers (eight previous records).

White-tailed Lapwing *Vanellus leucurus*

ARMENIA Second record and first breeding record: one in Araks Valley on 9th May 1999, and five pairs breeding at same site on 1st June 1999.
BULGARIA Third and fourth records: adult at Shabla Lake on 1st May 2000, and two adults at Durankulak Lake on 1st-2nd May 2000 (*BSPB National Bird Data Bank*).
DENMARK Second record: Salthammer Odde, Bornholm, on 15th May 1999.
GERMANY Third record: Katinger Watt/



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61. White-tailed Lapwing *Vanellus leucurus*, Chituc, Black Sea Lagoons, Romania, May 2000.

Schleswig-Holstein on 2nd and 5th June 1999*.
HUNGARY Third and fourth records: 25th September 1997, and 15th July 1999 (*Túzok* 4: 81-85).
MALTA Fourth record: 5th May 2000*.
NETHERLANDS Fourth record: adult from 21st February to 8th March 1998 and 4th September to 9th October 1998 (*Dutch Birding* 21: 316).
ROMANIA Large influx and first breeding records: 43-54 during 30th April to 16th July 2000, with seven nests located (three previous records; *Brit. Birds* 93: 400-401, plates 220-225).

Northern Lapwing *Vanellus vanellus*

GREAT BRITAIN Population estimate: 69,800 pairs in Scotland in 1998 (*Scot. Birds* 20: 73-80).

Semipalmated Sandpiper *Calidris pusilla*

FRANCE Vagrant: 1st August 1995 (*Ornithos* 6: 152).
MOROCCO Second record: 8th April 1999*.
NETHERLANDS Vagrant: 8th-17th August 1998 (five previous records; *Dutch Birding* 12: 316).

Western Sandpiper *Calidris mauri*

EGYPT First record: two at Zaranik, north Sinai, on 30th-31st January 2000*.
FRANCE Third and fourth records: 20th-21st September 1998, and 9th-12th September 1998 (*Ornithos* 6: 152).
IRELAND Third record: Ballydehob, Co. Cork, on 1st-8th September 1999.

Red-necked Stint *Calidris ruficollis*

DENMARK Deletion: after reconsideration by the Danish rarities committee, this species has been deleted from the Danish List (*DOFT* 93: 132).
IRELAND First record: Ballycotton, Co. Cork, on 2nd-5th July 1998.
NETHERLANDS Third record: adult at Den Bosschen, Zuid-Holland, on 4th July 1998 (*Dutch Birding* 21: 316).

Little Stint *Calidris minuta*

DENMARK Deletion: after reconsideration by the Danish rarities committee, the sole winter record of this species has been rejected (*DOFT* 93: 132).

Least Sandpiper *Calidris minutilla*

FRANCE Vagrant: 6th September 1998 (*Ornithos* 6: 153).

White-rumped Sandpiper *Calidris fuscicollis*

DENMARK Vagrant: Skagen, N-Jutland, on 1st August 2000* (ten previous records).
FINLAND Fifth record: 23rd June 1998 (*Linnut* 34: 32).
GERMANY Vagrants: 29th-30th July 1998*, 25th-26th August 1998*, 27th-29th July 1999*, and 29th August 1999* (eight previous records).
MOROCCO First record: Barrage Idriss on 21st September 1999*.
POLAND First record: 28th-29th May 1998 (*Notatki Orn.* 41: 37).

Baird's Sandpiper *Calidris bairdii*

FINLAND Fourth record: 20th-22nd September 1998 (first since 1973; *Linnut* 34: 30).

Pectoral Sandpiper *Calidris melanotos*

CYPRUS Vagrant: 14th-22nd September 1997 (*Cyprus Annual Report* 46: 85).
HUNGARY Influx: eight between 13th September and 26th October 1999, including five at Fertőújlak between 9th and 26th October 1999* (nine previous records).

Sharp-tailed Sandpiper *Calidris acuminata*

NETHERLANDS Second and third records: adult at Ezumakeeg, Friesland, on 6th-23rd August 1998, and second adult at same location on 6th-8th August 1998 (*Dutch Birding* 21: 316).

Broad-billed Sandpiper *Limicola falcinellus*

PORTUGAL First record for mainland Portugal: Montenegro, Faro, on 25th April 1997 (*Pardela* 11: 12).

Stilt Sandpiper *Micropalama himantopus*

FRANCE Vagrant: 11th October 1997 (*Ornithos* 6: 154).

IRELAND Vagrant: juvenile or first-winter at Tacumshin, Co. Wexford, on 22nd-29th October 1989 (apparently the first European record of a juvenile).
NETHERLANDS First record: adult at Blauwe Kamer, Utrecht, on 24th July 1998 (*Dutch Birding* 21: 316, 333-336).

Buff-breasted Sandpiper *Tryngites subruficollis*

HUNGARY Third record: Dunatetétlen, Böddiszék, on 2nd-3rd October 1999*.
MALTA Third record: April 1999*.
NETHERLANDS Vagrant: 16th-19th September 1998 (ten previous records; *Dutch Birding* 21: 318).

Great Snipe *Gallinago media*

LATVIA Breeding census: 200-300 pairs in 1999 (much higher total than previous estimate, of five to 20 pairs, in 1991; *Putni dabâ* 4: 3-18).

Short-billed Dowitcher *Limnodromus griseus*

FRANCE First record: Séné, Morbihan, on 10th October 1998 (*Ornithos* 6: 155).

Long-billed Dowitcher *Limnodromus scolopaceus*

NORWAY Vagrant: 4th September 1996 (six previous records; *Fugleåret* 3: 10).
PORTUGAL Second record for mainland: 8th November 1997 (*Pardela* 11: 12).

Whimbrel *Numenius phaeopus*

ARMENIA Fourth record: three in Araks Valley on 9th May 1999.

Slender-billed Curlew *Numenius tenuirostris*

HUNGARY Vagrant: 17th September 1974 (seven previous records; *Túzok* 4: 110).

Eurasian Curlew *Numenius arquata*

GREAT BRITAIN Population estimate: 32,000 pairs in Scotland in 1998 (*Scot. Birds* 20: 73-80).

Marsh Sandpiper *Tringa stagnatilis*

BELARUS First and second breeding records: southern region in 1996, and central region in 1996-98 (*Subbuteo* 2: 39).
NORWAY Vagrant: 27th August 1995 (*Fugleåret* 3: 12).

Greater Yellowlegs *Tringa melanoleuca*

DENMARK Deletion: after reconsideration by the Danish rarities committee, this species has been deleted from the Danish List (*DOFT* 93: 132).

Lesser Yellowlegs *Tringa flavipes*

NETHERLANDS Fourth record: 15th-17th and 21st July 1998 (*Dutch Birding* 21: 318).

Wood Sandpiper *Tringa glareola*

DENMARK Breeding census: 85-90 pairs in 1999 (*DOFT* 94: 63).

Terek Sandpiper *Xenus cinereus*

MALTA Third record: May 2000*.
NETHERLANDS Vagrants: 17th-24th May 1998, 28th-29th May 1998, and 9th-11th October 1998 (13 previous records; *Dutch Birding* 21: 318).

Spotted Sandpiper *Actitis macularia*

MOROCCO Third record: adult at Souss estuary on 5th April 1999*.

Willet *Catoptrophorus semipalmatus*

FRANCE First twentieth-century record: juvenile moulting into first-winter plumage at lagune de La Belle Henriette and La Faute-sur-Mer, Vendée, on 12th-13th September 1998 (*Ornithos* 6: 156).

Wilson's Phalarope *Phalaropus tricolor*

ICELAND Fourth record: 21st-26th September 1997 (*Bliki* 21: 44).

Grey Phalarope *Phalaropus fulicarius*

ESTONIA First record: first-year on Saaremaa island on 12th-16th November 1999*.

Pomarine Skua *Stercorarius pomarinus*

HUNGARY Autumn influx of juveniles: 18 during 20th September to 22nd October 1999.
SLOVENIA Third and fourth records: 17th June 1994, and 28th September 1999 (first two were in September 1940 and October-November 1988; *Acrocephalus* 20: 189-191).

Great Black-headed Gull *Larus ichthyaetus*

BELARUS Second record: adult in Zhitkovichi district, Gomel, on 6th June 1999.
GERMANY Fourth record: first-year at Altwarmbüchener See/Niedersachsen during 5th September to 9th October 1998*.

Mediterranean Gull *Larus melanocephalus*

FINLAND Vagrant: 3rd October 1998 (11 previous records; *Limnit* 34: 31).
FRANCE Breeding status: 1,393 pairs in 1998 (large increase from 111-112 pairs in 1991; *Ornithos* 7: 9).

Laughing Gull *Larus atricilla*

NORWAY First record: 5th July 1996 (*Fugleåret* 3: 10).

Franklin's Gull *Larus pipixcan*

FRANCE Vagrant: 18th-24th August 1998 (*Ornithos* 6: 158).
ICELAND Third record: 19th June 1997 (*Bliki* 21: 45).
IRELAND Third to seventh records: adult at Nuttis Corner, Co. Antrim, on 5th June 1998 now accepted as third record, so that on 11th-21st October 1998 (*Brit. Birds* 93: 124) becomes fourth; first-winter at Kinsale, Co. Cork, 11th January 1999; adult or second-year at Gormanston, Co. Meath, 5th September and 4th October 1999, and probably the same at Swords Estuary, Co. Dublin, 22nd September 1999 and at Lurgangreen, Co. Louth, 17th October 1999; first-winter at Newport Tip, Co. Mayo, 4th-16th December 1999.

Little Gull *Larus minutus*

DENMARK Breeding census: one pair in 1999 (*DOFT* 94: 64).
GERMANY Largest influx ever: 21,000 in eastern Schleswig-Holstein on 30th April 1998.

Sabine's Gull *Larus sabini*

ESTONIA Second record: adult on Hiiumaa island on 23rd-24th July 1999 (first record was on 31st July 1964).
HUNGARY Second record: 27th September to 3rd October 1998 (*Túzok* 4: 114).

Bonaparte's Gull *Larus philadelphia*

GERMANY First record: adult at Münster/Nordrhein-Westfalen on 19th-28th March 1998*.
ICELAND Vagrant: 13th April 1997 (nine previous records; *Bliki* 21: 45).
NORWAY Second and third records: 17th December 1995 to 20th April 1996, and 23rd April to 10th May 1996 (*Fugleåret* 2: 14; 3: 10).

Slender-billed Gull *Larus genei*

FRANCE Breeding status: 566 pairs in 1998 (*Ornithos* 7: 9).
HUNGARY Third and fourth records: 11th May 1998, and 30th May 1998 (*Túzok* 4: 114).
POLAND Second record: 21st May 1998 (*Notatki Orn.* 41: 40).
SWITZERLAND Vagrants: two adults at Fanel BE/Chablais de Cudrefin on 15th April 2000.

Audouin's Gull *Larus audouinii*

FRANCE Breeding status: 60-62 pairs in 1998 (*Ornithos* 7: 9).

Ring-billed Gull *Larus delawarensis*

NETHERLANDS Vagrant: 18th January to 11th February 1998 and 18th September 1998 into 1999 (six previous records; *Dutch Birding* 21: 318).
POLAND Fifth record: 30th January 1998 (*Notatki Orn.* 41: 40).
SLOVAKIA Vagrant: first-winter on River Danube on 21st December 1990.

Common Gull *Larus canus*

FRANCE Breeding status: 29-33 pairs in 1998 (*Ornithos* 7: 10).

Lesser Black-backed Gull *Larus fuscus*

FINLAND First record of race *intermedius*: 7th May 1997 (*Limnit* 34: 31).

Herring Gull *Larus argentatus*

SWITZERLAND First record of race *argenteus*: fourth-year at Morges on 24th January 1998 and same individual, as adult, at same location during 17th November to 28th December 1998.

Yellow-legged Gull *Larus cachinnans*

FINLAND Second and third records: 29th

August 1998, and 10th-11th October 1998 (*Linnut* 34: 31).
IRELAND First record of race *cachinnans*: adult at North Foreshore Tip, Belfast, Co. Antrim, on 13th February 1998.

Iceland Gull *Larus glaucoides*

NORWAY First record of race *kumlieni*: 27th March 1996 (*Fugleåret* 3: 11).

Glaucous Gull *Larus hyperboreus*

BULGARIA First record: first-winter near Lake Shabla, Black Sea, on 29th December 1998 (*BSPB National Bird Data Bank*).
HUNGARY Vagrant: 17th-18th December 1998 (seven previous records; *Túzok* 4: 114).

Ross's Gull *Rhodostethia rosea*

DENMARK Vagrants: Hirtshals Havn, N-Jutland, on 31st January 2000*, Skagen Havn, N-Jutland, on 12th-15th February 2000*, and Ribe, S-Jutland, on 10th March 2000* (seven previous records).
ESTONIA Second and third records: 10th November 1995 (*Hirundo* 12: 75), and adult on Muhu island on 6th November 1999*.
FINLAND Fourth record: 24th-25th May 1998 (*Linnut* 34: 32).
FRANCE Second record: adult on 7th April 1994 (*Ornithos* 6: 160; *Alauda* 68: 156).
NETHERLANDS Vagrant: adult on 9th April 1998 (*Dutch Birding* 21: 319).

Kittiwake *Rissa tridactyla*

ESTONIA First to fifth records: Remniku lähedal, Lisaku, in June 1990, on 10th June 1991, on 21st December 1993, on 14th May 1994, and on 21st October 1995 (five subsequent records; *Hirundo* 12: 76).

Ivory Gull *Pagophila eburnea*

ESTONIA First record: Tallin, Harjumaa, on 13th January 1996 (*Hirundo* 12: 77).

Gull-billed Tern *Sterna nilotica*

ESTONIA First and second records: Puhtu, Hanila, on 17th May 1997 (*Hirundo* 12: 77), and adult on Saaremaa island on 7th July 1999*.
FRANCE Breeding status: 370 pairs in 1998 (*Ornithos* 7: 10).

Caspian Tern *Sterna caspia*

ARMENIA Third record: two in Araks Valley on 1st June 1999.

Sandwich Tern *Sterna sandvicensis*

HUNGARY Vagrant: 16th July 1998 (ten previous records; *Túzok* 4: 115).
ICELAND Fifth record: 29th April 1996 (*Bliki* 21: 46).

Elegant Tern *Sterna elegans*

DENMARK First record: in colony of Sandwich Terns *S. sandvicensis* at Langli, S-Jutland, during 30th May to 12th June 2000*.

Roseate Tern *Sterna dougallii*

FRANCE Breeding status: 66-72 pairs in 1998 (*Ornithos* 7: 10).

Arctic Tern *Sterna paradisaea*

HUNGARY Vagrant: 15th May 1999* (six previous records).

Bridled Tern *Sterna anaethetus*

DENMARK Second record: Langli, S-Jutland, during 28th July to 4th August 1999.
GERMANY First record: Hahnöfer Nebenelbe/Niedersachsen on 1st June 1999*, and possibly the same at Heligoland on 3rd June 1999*.

Sooty Tern *Sterna fuscata*

PORTUGAL First record for mainland Portugal: Aveiro on 18th August 1998 (*Pardela* 11: 15).

Little Tern *Sterna albifrons*

DENMARK Breeding census: about 450 pairs in 1999 (*DOFT* 94: 64).

Whiskered Tern *Chlidonias hybridus*

NORWAY Vagrant: 14th-18th August 1995 (five previous records; *Fugleåret* 2: 14).

Black Tern *Chlidonias niger*

DENMARK Breeding census: 49-55 pairs in 1999 (*DOFT* 94: 65).
FRANCE Breeding census: 249-256 pairs in 1998 (*Ornithos* 7: 10).

White-winged Black Tern *Chlidonias leucopterus*

HUNGARY Breeding census: 1,125-1,270 pairs in 19 colonies on the southern Hortobágy.
ICELAND Fourth and fifth records: 12th June 1997, and 2nd-3rd August 1997 (*Bliki* 21: 47).

Common Guillemot *Uria aalge*

FRANCE Breeding census: 229-255 pairs in 1998 (*Ornithos* 7: 11).

Razorbill *Alca torda*

FRANCE Breeding census: 12-21 pairs in 1998 (*Ornithos* 7: 11).

Little Auk *Alle alle*

FINLAND Unprecedented influx: 58 in autumn 1998 (*Linnut* 34: 32).

Atlantic Puffin *Fratercula arctica*

FRANCE Breeding census: at least 256 pairs in 1998 (*Ornithos* 7: 12).

Collared Dove *Streptopelia decaocto*

ARMENIA First record: four in Yerevan in winter 1991/92 (*The Handbook of the Birds of Armenia*, 1999).
MALTA Vagrant: July 2000* (six previous records).

Oriental Turtle Dove *Streptopelia orientalis*

FRANCE Vagrant: adult on 18th May 1998 (*Ornithos* 6: 161).

Namaqua Dove *Oena capensis*

EGYPT Largest numbers ever: 200 at the Daraw Camel Market north of Aswan (recent observations suggest that this species has become a well-established resident in the Nile Valley between Aswan and Luxor).
SWITZERLAND Second record: Chavornay on 10th September 1999, accepted in Category E.

Mourning Dove *Zenaida macroura*

GREAT BRITAIN Second record: 13th-15th November 1999 (*Brit. Birds* 93: 539).

Monk Parakeet *Myiopsitta monachus*

BELGIUM Status: 50-60 at three sites in 1999 (*Ares* 36: 207-223).

Oriental Cuckoo *Cuculus saturatus*

FINLAND First to third records: two singing males in 1998 (*Linnut* 34: 32), and three singing males in 1999 (including two returning individuals from previous year).

Barn Owl *Tyto alba*

DENMARK Breeding census: at least 56 pairs in 1999 (*DOFT* 94: 65).
ESTONIA Third and fourth records: 25th May 1990, and 13th June 1991 (*Hirundo* 12: 78).

Eurasian Scops Owl *Otus scops*

NETHERLANDS Vagrant: singing at Ooyse Bandijk, Gelderland, during 17th May to 11th June 1998 (five previous records, first since 1970 and first record of singing; *Dutch Birding* 21: 319).

Eagle Owl *Bubo bubo*

DENMARK Breeding census: 25-30 pairs in 1999 (*DOFT* 94: 66).
NETHERLANDS Second breeding record: pair at St Pietersberg, Maastricht, again reared four young in 1998, as in 1997 (cf. *Brit. Birds* 93: 127; *Dutch Birding* 21: 319).

Snowy Owl *Nyctea scandiaca*

BELARUS Third record in past 20 years: Zhodino, Minsk, on 6th-27th December 1999.
DENMARK Influx: more than 30 records during winter 1999/2000*.
SWEDEN Major irruption: 50 in winter 1999/2000 (largest irruption since 1962/63).

Hawk Owl *Surnia ulula*

BELARUS Vagrant: second in 50 years, shot by hunters near Borisov, Minsk, in winter 1998/99 (seven previous records).

Pygmy Owl *Glaucidium passerinum*

DENMARK Invasion: more than 20 during autumn and winter 1999/2000*.

Short-eared Owl *Asio flammeus*

DENMARK Breeding census: nine to 15 pairs in 1999 (*DOFT* 94: 67).

Tengmalm's Owl *Aegolius funereus*

ARMENIA First and second records for over 35 years: one singing on 21st-23rd April 1994 in Kaladibi Grove, and remains of one found

nearby on 19th August 1994 (*The Handbook of the Birds of Armenia*, 1999).
DENMARK Influx and breeding census: more than 12 during autumn and winter 1999/2000, and up to four pairs in 1999 (*DOFT* 94: 67).

Common Nighthawk *Chordeiles minor*

FRANCE First record: adult female on Ouessant, Finistère, on 17th-28th September 1998 (*Ornithos* 6: 161).

White-throated Needletail Swift *Hirundapus caudacutus*

NORWAY Second record: 20th May 1995 (*Fugleåret* 2: 15).

Chimney Swift *Chaetura pelagica*

IRELAND First to fourth records: Ballydonegan, Co. Cork, on 23rd October 1999, Cape Clear Island, Co. Cork, on 23rd October 1999, Guileen, Co. Cork, on 25th October 1999, and Greystones, Co. Wicklow, on 30th October 1999.
SWEDEN First record: Gårby, Öland, on 6th-7th and 11th-12th November 1999.

Alpine Swift *Tachymarptis melba*

HUNGARY Second record: 27th September 1998 (*Túzok* 4: 80-81, 115).

Pallid Swift *Apus pallidus*

GERMANY First and second records: Bühl/Baden-Württemberg on 21st May 1998*, and Cuxhaven/Niedersachsen on 3rd October 1999*.
IRELAND Third record: Dundalk, Co. Louth, on 24th April 1998.
NORWAY Fourth record: 3rd June 1995 (*Fugleåret* 2: 15).
SWEDEN Third record: Stenboudd, Öland, on 9th October 1999.

Little Swift *Apus affinis*

PORTUGAL Fourth and fifth records: 3rd October 1997, and 13th June 1998 (*Pardela* 11: 16).

Smyrna Kingfisher *Halcyon smyrnensis*

CYPRUS Vagrant: 18th May 1999 (*Cyprus Annual Report* 46: 53).

Blue-cheeked Bee-eater *Merops superciliosus*

FINLAND Third record: 30th May 1999 (*Linnut* 34: 32).
NETHERLANDS Second record: Noordvaarder, Friesland, on 18th May 1998 (first was on 30th September 1961; *Dutch Birding* 21: 319).

European Bee-eater *Merops apiaster*

DENMARK Breeding census: three pairs in 1999 (*DOFT* 94: 67).

Great Spotted Woodpecker *Dendrocopos major*

LATVIA Invasion: total of 2,240 passed through Pape during 7th August to 31st October 1999.

Middle Spotted Woodpecker *Dendrocopos medius*

ESTONIA First to third records: 6th October 1895, 13th October 1990, and 2nd March 1993 (*Hirundo* 12: 79).

White-backed Woodpecker *Dendrocopos leucotos*

SWITZERLAND Vagrants and first breeding: 25th May 1999 and pair with two young on 5th June 1999 at Prättigau; also 25th March to 21st May 2000 at Kanton (with two juveniles), 20th May, 1st-2nd June and 8th June 2000 at Prättigau (with juvenile), and 17th August 2000 at Wartau (four previous records).

National Correspondents

Countries for which records are included in this compilation are shown in **bold**.

ANDORRA Ann Matschke. **ARMENIA Vasil Y. Ananian. AUSTRIA Hans-Martin Berg. BELARUS Dr Mikhael E. Nikiforov. BELGIUM René-Marie Lafontaine. BULGARIA Dr Petar Iankov. CANARY ISLANDS Juan Antonio Lorenzo.** CHANNEL ISLANDS Glyn Young. **CROATIA Jelena Kralj. CYPRUS Stuart Irving. CZECH REPUBLIC Prof. RNDr Karel Šťastny. DENMARK Brian Rasmussen. EGYPT Sherif & Mindy Baha El Din.**

ESTONIA Dr Vilju Lilleleht. FAROE ISLANDS Soren Sorensen. **FINLAND Tom Lindroos. FRANCE Dr Philippe J. Dubois.** GEORGIA Alexander Gavashelishvili. **GERMANY Jochen Dierschke.** GIBRALTAR Charles E. Perez. **GREAT BRITAIN John Marchant.** GREECE George I. Handrinos. **HUNGARY Dr Gábor Magyar. ICELAND Gunnlaugur Pétursson. IRELAND Paul Milne.** ISRAEL Hadoram Shirihai & James Lotan. **ITALY Marco Gustin. LATVIA Dr Jānis Baumanis.** LITHUANIA Dr Petras Kurlavicius. LUXEMBOURG Tom Conzemius. MACEDONIA Branko Micevski. **MALTA Joe Sultana.** MONTENEGRO Dr Vojislav F. Vasić. **MOROCCO Dr Michel Thévenot. NETHERLANDS Drs Arnoud B. van den Berg. NORWAY Bjoern Ove Hoeyland. POLAND Dr Tadeusz Stawarczyk. PORTUGAL (including Azores and Madeira) Dr João Carlos Farinha. ROMANIA Jozsef Szabo.** SERBIA (As Montenegro). **SLOVAK REPUBLIC RNDr Dusan Karaska. SLOVENIA Iztok Geister.** SPAIN Dr Eduardo de Juana. **SWEDEN Tommy Tyrberg. SWITZERLAND Dr Bernard Volet.** TUNISIA Thierry Gaultier. **UKRAINE Dr Igor Gorbań.**

Looking back

Seventy-five years ago:

'WHITE-TAILED EAGLE IN ESSEX. On January 17th, 1926, under twenty-three degrees of frost, I drove seventy miles on the chance of seeing an "eagle," which, for the past three weeks, had been frequenting some woods in north Essex. By good fortune I had three splendid views of the bird as it was "driven" from one wood to another about fifty yards high over my head. In its size, general outline and lazy, flapping flight it might have been a Golden Eagle [*Aquila chrysaetos*], but as I could only see it from below and there was no sun it was very difficult to make out its colouring. Of this, however, I was certain, that its under parts were light yellowish and that its legs were bare and yellow. From below, no white was visible on the tail. I have little doubt but that the bird was an immature Sea-Eagle (*Haliaeetus albicilla*), though not since my boyhood days have I seen one of these rare birds on the wing. On several occasions it had been seen carrying a rabbit – on one occasion a hare – in its talons, and ground game was plentiful in the district. SYDNEY H. LONG' (*Brit. Birds* 19: 254, March 1926)

Fifty years ago:

'"NORTHERN" CHIFFCHAFFS IN THE BRITISH ISLES DURING THE WINTER, 1949-50. In addition to the records, published elsewhere (p. 86), of Chiffchaffs (*Phylloscopus collybita*) wintering in the British Isles, we have received reports of birds believed to belong to either the Scandinavian (*Ph. c. abietinus*) or the Siberian race (*Ph. c. tristis*). It will be recalled that a bird believed to be of the latter race was observed on Steep Holm in September, 1949 (*vide antea*, vol. xliii, p. 187). We have also had a report from Mr. Hugh Thomson that in September, 1949, and again in 1950, at Churt, Surrey, he heard a Chiffchaff uttering "a long drawn out 'see—oou' note, so striking and powerful as to attract the attention of non-ornithologists." There was, however, nothing in the bird's appearance to suggest that it did not belong to the typical race.

We have submitted those notes to Mr. Kenneth Williamson whose comments follow the records. It will be seen from his remarks that it would be unwise to attach subspecific names to those birds, and we have therefore used the word "Northern" at Mr. Williamson's suggestion. It should, however, be noted that the late B. W. Tucker commented on Mrs. Gough's record from Co. Galway that it probably constituted "as definite an identification of the Siberian race as is obtainable."THE EDITORS.' (*Brit. Birds* 44: 94, March 1951)

Twenty-five years ago:

[From 'Birds in Ireland during 1970-74', by M. A. Ogilvie] 'The Greenland White-fronted Goose *Anser albifrons flavirostris* continues to give cause for concern. The principal haunt at the Wexford Slobs is not protected but shooting, though still relatively heavy, is limited to a fixed number of organised shoots per winter. Elsewhere, however, the picture is very gloomy with bogs being drained or disturbed and several small flocks disappearing. Furthermore the Wexford Slobs flock has not increased in corresponding fashion, not that this would necessarily be welcomed wholeheartedly as one can already argue that the population is even now over-concentrated at this one haunt.' (*Brit. Birds* 69: 97, March 1976)

European Honey-buzzard Survey 2000 and 2001:

preliminary results and request for further surveys

L.A. Batten

For many years, attempts to monitor accurately the British breeding population of European Honey-buzzards *Pernis apivorus* have failed, owing to incomplete submission of data by some recorders concerned with the security and conservation of this species, and to poor survey coverage of some apparently suitable areas. The report of the UK Raptor Working Group, chaired by the Department of the Environment, Transport and the Regions and the Joint Nature Conservation Committee ('Report of the UK Raptor Working Group', Anon. 2000), identified the need to improve our knowledge of the population status of this species. In addition, Britain also has international obligations (for example, under the EU Birds Directive) to conserve and monitor the status of migratory species. The European Honey-buzzard is one species that may benefit from predicted climate changes associated with global warming, and as such we must be in a position to assess population trends. The Rare Breeding Birds Panel (RBBP) believed that the best assessment of the true total number of pairs could be obtained through a national survey for this species in 2000 (*Brit. Birds* 92: 345-346). The purpose of this note is to report on how the national survey was organised, to give a provisional total of breeding European Honey-buzzards found in Britain in that year, and to encourage all the participants to maintain or increase this level of survey coverage in 2001.

Organisation of the 2000 survey

In order to improve coverage in 2000, all appropriate Raptor Study Groups and/or County Recorders were asked to appoint co-ordinators, whose job it was to arrange surveys of all suitable habitat in their areas, and to pursue casual reports sent to them by other observers. All the County Recorders, and almost all the Raptor Study Groups that were approached, agreed to help.

An advisory note was produced to help co-ordinators to publicise the survey, and to advise recorders on how best to search for this species. In summary, it asked observers to record details of European Honey-buzzard sightings in their county, and to send in any observations to their local co-ordinator as soon as possible.

Response

By the end of February 2001, responses had been received from 16 of the 35 co-ordinators. Many of those outstanding will almost certainly involve negative reports, although responses are awaited from several traditional areas for this species. So far, the total number of confirmed breeding pairs stands at 29, with an additional 32 probable or possible breeding pairs. This total, of 61 sites where European Honey-buzzards bred or may have bred, is the highest number reported in any one year; the final figure is likely to be higher still.

The confirmed numbers of pairs and the maximum total pairs since 1991 are as follows:

Pairs	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Confirmed	2	8	6	9	9	14	14	17	?	(29)
Max. total	22	26	27	28	30	34	39	37	?	(61)

Although more pairs have been reported as a result of this survey, the RBBP will continue to publish the totals only for Great Britain as a whole, rather than by individual counties. A number of people commented that it had not been possible to cover all apparently suitable sites for European Honey-buzzards in their area, and that the survey should continue in 2001 so as to allow further areas to be explored. While some observers had already planned to do this, the RBBP believes that a repeat of the full survey in 2001 is necessary in order to locate further breeding areas for this species. The panel would like to encourage observers to repeat last year's survey in a similar fashion, and the following guidance notes are included for this purpose.

Guidance notes for recorders

To avoid duplication and to improve coverage, please contact the local co-ordinator (County Recorder if co-ordinator is not known) to report which part of the county you intend to cover. **In particular, it is important to note that the European Honey-buzzard is a Schedule 1 species, which it is illegal to disturb at or near an active nest without a licence. No-one should try to locate nests without a licence.** The co-ordinator will arrange to establish the breeding status of any birds discovered. To minimise risk of disturbance, we strongly advise that details of sightings be reported only to the co-ordinator and County Recorder.

Given its habitat requirements, this species can occur anywhere where there is woodland cover, including conifers and scattered woodland interspersed with farmland, heathland or moorland. Potential breeders may be seen from mid May to the end of August. Observations during late May and early June are important for early location of nesting birds. In the rest of June, during incubation, breeding pairs are circumspect and may be very hard to see. If survey time is limited, the second half of July and all of August, when adults are feeding young, is the period when the species is most easily observed. From the beginning of August, migrants can start to pass through and this may confuse the picture. Additional non-breeding individuals can wander considerably throughout the season; even breeding birds regularly move 10-20 km to feed. The characteristic aerial display may not be seen very often, even from breeding pairs, especially isolated ones. Conversely, in some areas, non-breeding individuals may display; these have also been known to bring food to stick platforms which they have constructed. However, all May-August records of European Honey-buzzard should be submitted.

Potential viewing points should be located prior to the survey, to give a long-distance vista with as much sky as possible to enable soaring birds to be seen. It is also important to establish the quickest route between viewing points so as to maximise watching time and to follow up birds located at a distance. The best times to watch are between 9 a.m. and 1 p.m., though honey-buzzards can be seen at any time of the day. Wet weather is unlikely to produce many records, but intervals between showers or the period after a band of rain has passed over will tempt the birds up. If only one watch is to be carried out in an area, it is recommended that this should be of at least four hours.

Reporting sightings

Given the difficulty of proving that breeding has occurred, as much detail as possible should be reported in order to aid interpretation of the observations. Please record the following details:

Name of observer(s); grid reference of observation point(s), and an estimate of distance and direction of bird(s) from observation point(s); time and date; details of weather; number of birds; breeding status (see below).

Please also submit negative observations, with details of location, direction of watching, weather, date and time.

Criteria for establishing breeding status

Confirmed breeding

1. Nest with eggs or young.
2. Recently fledged young.

Probable/possible breeding

3. Adults entering or leaving woodland, indicating occupied nest (May to mid August).
4. Adult carrying food (May to mid August).
5. Adult carrying sticks or spray into woodland.
6. Adult giving alarm calls.
7. Wing-clapping over/into woodland.
8. Adult attacking other raptors/corvids.
9. Pair observed in suitable nesting habitat.
10. Adult in same area on at least two different days, at least one week apart, in May-July.
11. Long-distance direct flight to or from woodland.
12. Low-level circling over woodland.
13. Adult perched in tree top in woodland.
14. Species observed in suitable habitat.
15. Wing-clapping display in August.
16. Tree nests of social wasps found destroyed.

Possible postponement of 2001 survey

Owing to restrictions on access to sites because of the recent outbreak of foot-and-mouth disease in Britain, this survey may have to be postponed until next year. All potential participants are advised to bear this possibility in mind when planning their work. Further updates will be provided in *British Birds*. See also the item on foot-and-mouth on page 102.

Dr L.A. Batten, 41 Turpins Chase, Oaklands, Welwyn, Hertfordshire AL6 0RP; e-mail: leobatten@aol.com

Notes

Great Cormorant swallowing plastic bag

On 25th January 1996, on a brief visit to Fareham, Hampshire, I stopped to look at the mudflats. From my car, I saw a number of plastic bags that contained what looked like kitchen waste. The larger bags held several smaller polythene bags. The waste was being scavenged by Herring Gulls *Larus argentatus*, Grey Herons *Ardea cinerea* and Great Cormorants *Phalacrocorax carbo*. One cormorant walked up to a large plastic bag, took out one of the smaller waste-filled bags, and swallowed it as though it were a fish. From the confident way in which it approached the bags, it appeared that this was not the bird's first meal from the site. The swallowed bag of waste was about 20 cm x 10 cm in size. The cormorant appeared to suffer no ill effects as I watched for about 20 minutes, although it may have suffered later.

Major Timothy T. Hallchurch
Millfield, 5 Mill Lane, Horton cum Studley, Oxford OX33 1DH

EDITORIAL COMMENT This behaviour seems very bizarre for a species which normally dives for its food. Derek Goodwin has added: 'This called to mind the nonsense rhyme that begins "The Common Cormorant or Shag [*P. aristotelis*] lays eggs inside a plastic bag", and inspired the following:

Birdwatcher – "Oh Common Cormorant (or Shag)
Why eat waste food in plastic bag?"
P. carbo – "In this world, b……d up by Man,
Us birds must live as best we can,
Now there's so little chance that one
Can find a nice plaice in the sun."'

Roost-site fidelity of European Nightjar

During the early evening of 13th July 1995, on Greenham Common, Berkshire, I accidentally flushed an adult male European Nightjar *Caprimulgus europaeus* from its roost on a bare, horizontal branch about 2.5 cm thick and 15-20 cm above the ground, at the base of a small Gorse bush *Ulex europaeus* growing at the edge of a group of trees on open heathland. From the accumulation of droppings below the branch, I estimated that the roost had been used for the previous five to ten days. I marked and photographed the site for future reference, although I did not visit it again during 1995.

At about 09.00 GMT on 13th May 1996, I checked the site again and found a pair of nightjars roosting. The position of the droppings indicated that one of the birds had been roosting on the same horizontal branch as was used in the previous year, while the other had been using a slightly lower branch 20-30 cm away. Although it was early in the season, the droppings suggested that the roost had already been in use for one to three days. Neither individual was present on 15th May, although the male was located at a new roost, a ground site beneath a bush 10-15 m away. Vacation of a roost site after disturbance is typical for this species (Cleere 1998, *Nightjars: A Guide to Nightjars and Related Nightbirds*). The Gorse bush was checked regularly during May and June, and on 22nd June the male was again roosting on the bare branch.

BWP (vol. 4) states that roost sites may be used from year to year, although it is unclear whether this is a reflection of adult site fidelity or is due to the scarcity of ideal places in a particular area. With regard to this part of Greenham Common, I would suggest that the latter is the more appropriate explanation. The area is small and traditionally supports only one pair of nightjars. A thorough examination of this area in previous years had revealed very few suitable roosting and nesting sites for this species. During 1996, only five roost sites were located, all confined within one small group of trees. Two

were on leaf litter on the ground beneath bushes, two were on small, bare branches just above the ground, and one was on top of an old tree stump about 30 cm above ground.

Nigel Cleere
2 Hawthorn House, Roundfields, Upper Bucklebury, Berkshire RG7 6RQ

Great Spotted Woodpecker bathing in leaf clusters after rain

At 10.55 GMT on 20th June 1996, at Footscray Meadows, Greater London, I observed a female Great Spotted Woodpecker *Dendrocopos major* moving about rather clumsily in a terminal leaf cluster of an oak *Quercus*, at a height of approximately 10 m. I initially thought that it was foraging, but, on closer inspection, saw that the foliage of the tree appeared to have little of succour for a woodpecker, and the bird's behaviour suggested that it was in fact bathing. It seemed to be working the terminal leaf clusters of the canopy as a series of patches, spending a minute or so thrashing around in one cluster before moving on to the next and repeating the behaviour. Some of the actions used were typical of those of a bathing bird, and the woodpecker was occasionally upside-down while flapping, a considerable amount of rainwater being released from the leaves by its actions. After six or seven minutes, and four or five patches later, a bedraggled woodpecker emerged to shake itself dry and to preen a little.

There are numerous references to birds bathing in water-soaked vegetation (e.g. *Brit. Birds* 75: 36, 81). In addition, J. M. Stainton suggested (75: 81-82) that special bathing postures may be helpful to larger or chiefly arboreal species, such as the Golden Oriole *Oriolus oriolus*. Despite the woodpecker's considerable and ungainly flapping around, it seemed also to adopt more typical bathing postures.

The rain that had preceded the observation followed a prolonged warm and dry spell; puddles had not developed, as the rain was comparatively light and surface water had presumably drained away very quickly. It is possible that this woodpecker's response was stimulated by the local availability of rainwater among the foliage, and was perhaps influenced by the end of rigorous breeding activities.

Robert Dawson
51 Charterhouse Road, Orpington, Kent BR6 9EJ

EDITORIAL COMMENT Since Great Spotted Woodpeckers very frequently forage for caterpillars among foliage in June and July, it seems quite possible that this individual had been doing just that. In such cases, the species typically thrashes about among the leaves, as described. This woodpecker may well, under the circumstances, have been stimulated to bathe by the presence of water, especially if, as Mr Dawson indicates, there were few caterpillars available.

Common Chiffchaff collecting nest material in autumn

On 21st August 1996, in the grounds of Chester Zoo, Cheshire, I located a Common Chiffchaff *Phylloscopus collybita* among a flock of tits *Parus* by its song and intermittent 'huet' calls. As I watched the warbler flycatching and foliage-gleaning in a Wild Plum tree *Prunus domestica*, I was surprised when its attention was turned towards a knot of grassy fibres caught in the twigs. These it tugged and teased apart in a manner typical of that used when gathering nest material, the fibres being held crosswise in the bill for a few seconds and then discarded. This behaviour was observed three times within the space of a minute, before the warbler continued on its way, and was clearly not associated with any feeding activity.

Although it is well known that the Common Chiffchaff will often resume singing in the autumn, I can find no reference to the re-emergence in that season of what is clearly behaviour relating to the gathering of nest material.

P. I. Morris
Caughall Farmhouse Cottage, Caughall Road, Upton-by-Chester, Cheshire CH2 4BW

EDITORIAL COMMENT This sort of very low-intensity nesting behaviour is indulged in by many species, and it is perhaps not surprising that it should occur also with the Common Chiffchaff, even if seemingly not previously recorded for that species.

Eurasian Treecreeper sunning

At about noon on 19th June 1996, in the Black Wood of Rannoch, Perthshire, I observed a Eurasian Treecreeper *Certhia familiaris* sunning. The bird flew from a mature Scots Pine *Pinus sylvestris* to the ground, where it assumed a spread-eagle posture on the sloping sandy and stony bank beside the forest ride. Being south-facing, this bank was very warm. The treecreeper, because of its cryptic coloration, was difficult to distinguish from the substrate, except that its wingbars were very striking. When I approached, it flew back into the Scots Pine. In more than 50 years of birdwatching, I had never before observed sunning behaviour by this species.

Ron Youngman
Blairbroisk Cottage, Ballinluig, Perthshire PH9 0NE

Carrion Crow taking fish from water while in flight

At 16.30 hours on 10th May 1996, while in a narrow boat on the Oxford Canal at Banbury, Oxfordshire, we were passing through a light industrial area when we saw a Carrion Crow *Corvus corone* descend from the roof of a building. It flew towards us, just skimming the water's surface and appearing as if about to alight, in the same way as that of a duck (Anatidae), with its wings held back and its feet paddling the surface of the water. At the last possible moment it ducked its bill into the water, plucked out a small fish and then flew off with its trophy in its bill. We were unable to see whether the fish was alive or dead, but, in any case, this was an astonishing sight.

Jackie Williamson
1 Walnut Close, Clifton, Deddington, Oxfordshire OX15 0PG

EDITORIAL COMMENT Carrion Crows are well known to take fish and other food items from water (*BWP*, vol. 8), frequently by wading in, or by plucking food while standing (e.g. *Brit. Birds* 87: 478), but often hovering briefly before seizing a fish (e.g. 48: 91; 54: 120), or alighting momentarily on water (e.g. 47: 405-406), or even jumping in and becoming fully immersed (e.g. 69: 273). The method described by Mrs Williamson, however, appears to be more exceptional, although a couple of records of possibly similar behaviour were published in the 1950s, in one case involving a Carrion Crow which flew low over water for some 2 m before snatching a fish, without alighting, and making off with the food held in its bill (*Brit. Birds* 48: 91).

Common Raven imprisoned on nest and fed by mate

On 5th June 1995, on Eday, Orkney, my wife and I were surprised to come across the nest of a pair of Common Ravens *Corvus corax* still occupied on so late a date. The nest was about 4.5 m up from the beach, on a cliff ledge. The male raven was flying around, croaking, while the female was standing on the nest. We could not understand why the latter had allowed us to approach so closely until we discovered that she was fastened to the nest by a length of orange bailer twine, which made up a good part of the nest material. The twine had cut into her leg, and the presence of old scar tissue showed that she had been thus entangled for a considerable length of time. In her attempts to free herself, she had, presumably, pushed out her young, which were lying at the foot of the cliff in an advanced state of decay.

As the nest was too high for us to climb



Peter Lowes

62. Common Raven *Corvus corax* imprisoned on nest, Eday, Orkney, June 1995.

up to, I returned to our guest house to fetch a ladder. We managed to free the bird, which flew straight to her mate on the clifftop. It has to be assumed that, in the weeks or months during which the Common Raven had been imprisoned on the nest, her mate had been feeding her.

Peter Lowes
43 Millfield Avenue, Northallerton, North Yorkshire DL6 1AT

EDITORIAL COMMENT Derek Goodwin has commented: 'I take it that the bird had got *itself* entangled, rather than having been deliberately tied to the nest by human beings. ... It seems certain (unless Man was also involved) that the Common Raven must have been fed by its mate for whatever period it was fastened to the nest.'

An extraordinarily late Common Chaffinch nest

The laying season of the Common Chaffinch *Fringilla coelebs* in Europe generally extends from mid April to late June (*BWP*, vol. 8). In 1996, at several Oxfordshire study sites, the success of early nests of this species was extremely low. This was due to adverse weather conditions throughout April and the start of May, combined with a high rate of predation of eggs and chicks by, presumably, crows (Corvidae) and mustelids. Consequently, many pairs delayed nesting, or re-nested at relatively late dates.

One nest in particular, in a hedge at a conventionally managed farm near Faringdon, Oxfordshire, was found on 20th July. Three eggs were soon laid, all of which hatched, and the three chicks fledged on 15th August.

Dr Richard Bradbury and Antonios Kyrkos
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EDITORIAL COMMENT There are very few records of Common Chaffinches laying later than 20th June, and clutches started after the beginning of July are very rare, although exceptional cases of even later nests are not unknown (*Brit. Birds* 57: 102-118). In 1962, for example, two half-grown young were found in a nest in Somerset on 13th August, with laying having started about 22nd July (*Brit. Birds* 57: 331).

Letters

Ruddy Ducks in the UK

I was not terribly reassured by any of the comments of Mark Avery (*Brit Birds* 93: 500) in reply to my criticism of the pilot Ruddy Duck *Oxyura jamaicensis* cull and the rationale behind it (93: 394-396). Rather disturbingly, the RSPB's Director of Conservation gives a very contradictory message. He reports that my comments are misplaced, but appears to agree with my contention that Colin Bibby was wrong to tar all alien introductions with the same brush. He then gives a rather bad example of a 'benign' UK introduction in the Little Owl *Athene noctua*. Little Owls can have a devastating effect on local bird populations, as the late R. M. Lockley (1947) proved on Skokholm, where the owls fed almost entirely on European Storm-petrels *Hydrobates pelagicus*. As with Ruddy Ducks in Spain, however, that 'problem' was rather localised and did not require the destruction of the entire UK population of alien Little Owls.

In contradiction to his comment on Little Owls, Dr Avery states that the RSPB supports the removal of alien species where these pose a demonstrable threat to native wildlife. So, too, do I. The Ruddy Duck, however, clearly does not enter this category in the UK, and is a 'problem', of sorts, only in some parts of Spain and nowhere else. While accusing me of prejudging the culling exercise, Dr Avery appears unequivocally to predict the resultant effect of a few hybrids on the evolutionary patterns of two distinct duck species.

If the RSPB's policies are based on 'sound science and rational analysis', were these ever applied in the case of the Ruddy Duck? I fail to find much evidence of scientific application before setting out on this fiasco. Money squandered on culling would perhaps have been better invested in the sound science of a BTO ringing programme for Ruddy Ducks, since, of all the Ruddy Ducks ringed in the UK to date (about 300+ by 1998), none of the ten or so recoveries crossed the channel, let alone made it to Spain, and waterfowl have among the highest recovery rates of all bird species ringed. Indeed, some of the Ruddy Ducks ringed in the southeast of England have moved in a diametrically opposite direction – to the northwest. Yet we are told (Hughes 1996) that 'strong circumstantial evidence' suggests that UK Ruddy Ducks are fuelling this avian 'invasion' of Spain. The rational scientific facts, however, indicate the exact opposite. If they did not reach Spain naturally, Ruddy Ducks probably arrived there from elsewhere in continental Europe. Wildfowl collections exist in numbers in most European countries, including Spain. The case for culling Ruddy Ducks in the UK is at best not proven and has been based on the most notional of evidence.

References

Lockley, R. M. 1947. *Letters from Skokholm*. London.

Hughes, B. 1996. The Ruddy Duck *Oxyura jamaicensis* in the Western Palearctic and the threat to the White-headed Duck *Oxyura leucocephala*. In Holmes, J. R. & Simons, J. R. (eds.), *The Introduction and Naturalisation of Birds*: 79-86. HMSO, London.

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Status of Ferruginous Duck in Italy

We read with interest Keith Vinicombe's excellent article on the status and identification of Ferruginous Duck *Aythya nyroca* (*Brit. Birds* 93: 4-21). However, we were disappointed to see that in the detailed review of the species' status in Europe there was no mention of Italy. In fact, Italy holds one of the largest breeding populations of Ferruginous Duck in Western Europe, along with internationally important wintering populations and migratory stopover sites. There are up to 60 breeding pairs in Italy, the majority of which are found in Sicily, with 15-32 pairs in the Lentini Lake/Simeto River area, and scattered pairs elsewhere on the island bringing the total up to about 40 pairs. In mainland Italy, the main breeding areas are in the Po River delta (northeast Italy), coastal wetlands in Puglia (southeast Italy), and the Brabbia marsh in Lombardy (northwest Italy). Owing

to poor coverage, it is likely that the current figure of 60 pairs in Italy is an underestimate. The Lentini Lake/Simeto River area is perhaps the most important wintering site for the species in Europe, supporting an average of about 250 birds. During winter 2000/01, approximately 200 Ferruginous Ducks overwintered on Lentini Lake, with an additional 50-60 at the Simeto River. Additionally, small numbers of Ferruginous Ducks spend the winter at scattered sites throughout Italy.

During migration, Italy and especially Sicily hold important concentrations of Ferruginous Ducks. Autumn maxima at Lentini include 550 in 1997. Spring concentrations at the Biviere di Gela, in far southern Sicily, are even higher, and may reach up to 1,500 in March. Elsewhere in Italy, the number of migrants is lower, but they can still reach significant concentrations (e.g. up to 60 at Maccarese pools, near Rome, in October 2000).

The importance of Italy in terms of Ferruginous Duck conservation should not, therefore, be overlooked.

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Unexpected Red-billed Choughs

Ken Osborne's letter (*Brit. Birds* 93:342) refers to a Red-billed Chough *Pyrrhocorax pyrrhocorax* shot in Middlesex in 1899, noting that it was unlikely to have been wild. A more curious case involved a Red-billed Chough found dead in Buckinghamshire, beside the road between Gerrards Cross and Beaconsfield, on 29th December 1991 (Harding 1992). It was recently dead and the finder, who was experienced in taxidermy, considered the bird's condition to be consistent with its being a traffic victim. The bird had been fitted with a BTO metal ring and three colour rings on Islay in 1986. It had been seen with a full complement of colour rings in summer 1990, but had not reappeared in 1991. When it was found dead, the BTO ring was still present but the colour rings were not. Taking into consideration the likelihood of a previously sedentary adult Red-billed Chough making such a long-distance movement, the species was not admitted to the Buckinghamshire list (Harding 1992). However, the occurrence of the bird was never satisfactorily explained. Ringed birds killed by traffic are often transported some distance before being found but, in this case, some deliberate (and thus possibly illegal) human intervention may have occurred.

Another Red-billed Chough, ringed on Bardsey, Caernarfon, in June 1975, was found long dead in April the following year on a tip at Liverpool, 142 km away (Spencer & Hudson 1978). Despite the curious circumstances, this is still the second-longest movement recorded for the species in Britain.

Occurrences such as these can make record assessment at local and national levels, and the analysis of ring-recoveries, very difficult.

References

Harding, A. 1992. *Buckinghamshire Bird Report* 1991.
Spencer, R. & Hudson, R. 1978. Report on bird-ringing for 1976. *Ringing & Migration* 1: 189-252.

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News and comment

Compiled by Bob Scott and Wendy Dickson

From floods to wetlands

RSPB Scotland is pressing the Scottish Parliament and Executive to promote large-scale wetlands as a basis for flood prevention, as well as improving the incentives in agri-environment schemes for positive floodplain management. With predictions that flooding could become more commonplace as a result of changes in our climate, radical solutions are now needed. The inevitable consequence of floodplain mismanagement (continued drainage and development) is a loss of their natural porosity. In turn, wetland wildlife has suffered, as wet-grassland habitat continues to disappear. The RSPB believes that we should be encouraging floodplains throughout Scotland to revert to their natural state, as at the Insh Marshes in Strathspey.

Alan Knox retires from BOURC

In May 2001, Alan Knox retires from the British Ornithologists' Union Records Committee (BOURC) after 17 years of continuous service, including four years as Chairman. On the occasion of his last Committee meeting, in December 2000, he was thanked for his thoroughly professional, painstaking and meticulous approach to everything he had done. His extensive museum expertise is something the Committee will find hard to replace. On behalf of the other members of the Committee, the present Chairman, Tony Marr, presented him with a copy of *Albatrosses* in recognition of his contribution. Whilst serving on the Committee, Alan made a huge contribution to British ornithology, including a number of key papers in *British Birds*.

Shetland sandeel fishery

The year 2000 marked the end of a three-year agreement among the RSPB, Scottish Natural Heritage and the Shetland Fishermen's Association concerning a close season between 1st June and 31st July during which no sandeel fishing was permitted. The close season helped relieve the pressure on local seabirds trying to find food for their young. The good news is that the existing arrangements have been agreed for a further three years. Two additional restrictions on the fishery permit only small boats (20 m in length, or less) to fish, and an annual catch not exceeding 7,000 tonnes.

Tug cover for Northern and Western Isles

It is well known that the waters of the Fair Isle Channel (between Orkney and Shetland) and the Minch (between mainland Scotland and the Western Isles) are two of the roughest sea areas in the UK. Both areas also have extremely important seabird colonies. Since January 1993, when the tanker *Braer* ran aground in Shetland, spewing 87,000 tonnes of crude oil and 1,600 tonnes of heavy bunker fuel into the surrounding marine environment, there have been a number of other near-accidents in both areas. Recently, a powerful ocean-going tug has been in place in both areas for the purpose of averting further disasters, but this cover has been absent during the summer months, which are also prone to gales and marine accidents. Now, after numerous representations by a number of bodies and a year-long review of the provision of tugs around the UK coast, the good news is that, from 1st October 2001, year-round tug cover is to be provided for both the Fair Isle Channel and the Minch.

Golden Plovers and Lapwings

The British Trust for Ornithology (BTO) recently reported the results of two winters of searching for and counting European Golden Plovers *Pluvialis apricaria* and Northern Lapwings *Vanellus vanellus*. Twenty volunteers observed these two species at study plots throughout Britain, mostly in lowland farmland, covering in excess of 100 square kilometres. About 4,100 European Golden Plovers and 13,500 Northern Lapwings were recorded. By carefully mapping the available habitats, it was shown that the birds exhibited very clear preferences, and that these changed as the winter progressed. For example, at Birchington, Kent, use of winter-sown cereals gradually diminished and almost all birds were on bare ground by late winter. Similarly, at a Hertfordshire site, birds arrived in early winter and used only growing cereal crops, but completely shunned these later for bare ground. For further details of the results of these surveys, funded by a partnership of the BTO and Joint Nature Conservation Committee, visit the BTO website www.bto.org

Correction

If you wish to contribute to Stephen Moss's social history of birdwatching, then his e-mail address is stephenmoss1@cs.com (not as reported in *Brit. Birds* 94: 47).

Pheasant-feeding helps farmland birds

Where Common Pheasants *Phasianus colchicus* are reared for shooting, many other birds benefit from the food planted out. A survey to investigate the benefits to other species is currently taking place, funded by MAFF and undertaken by the British Trust for Ornithology (BTO) in conjunction with the Game Conservancy Trust and the Allerton Research & Education Trust. Some preliminary findings are published in the latest issue of *BTO News* (No. 232). On 130 farms, visited during two winters, birds such as finches, buntings and thrushes proved more numerous on sown wild-bird cover than on surrounding crops. Of the many different mixtures sown as winter bird crops, kale was constantly preferred by most species, with an exotic South American plant, 'quinoa', also proving very good, and able to withstand northern climates. Maize, mustard, linseed and sunflower were associated only with some species, the last not being hardy enough to persist as a late-winter food crop. For further information, contact Ian Henderson at the BTO (e-mail: ian.henderson@bto.org).

Birding history in Cambridgeshire

If you are interested in the history of birdwatching, you will enjoy reading *Seventy-five years of birdwatching and bird studies in Cambridgeshire (and beyond)*, a publication to celebrate the 75th anniversary of the Cambridge Bird Club. Names such as Bibby, Bourne, Moore, Minton and Wallace are littered throughout the publication, demonstrating just what an influence Cambridge University has had on modern birdwatching. Copies are available from Bruce Martin, 178 Nuns Way, Cambridge CB4 2NS (price £8.00 including p&p).

Common birds in decline

Also published recently by the BTO are the latest figures on breeding birds in the wider countryside (see *BTO News* No. 232, or visit the website www.bto.org). The results show changes in populations of common species as measured by five major national bird surveys that monitor the 'health' of Britain's birds. Among the findings is that, over the past 25 years, 22 species are still showing a decline of 50% or more and a further ten species a decline of 25% or more, compared with only 12 that have doubled in population size. With Little Grebe *Tachybaptus ruficollis*, a new species on the list with a 51% decline, the other species in most rapid decline are Yellow Wagtail *Motacilla flava* at 81%, Marsh Tit *Parus palustris* (52%), Common Starling *Sturnus vulgaris* (61%) and Linnet *Carduelis cannabina* (55%). The two greatest declines are for Common Redpoll *Carduelis flammea* and Tree Sparrow *Passer montanus*, both down by 94% over 25 years.

European Ornithologists' Union

The European Ornithologists' Union was founded in August 2000, in Zurich. Its objectives are the advancement of ornithology and the promotion of the scientific study of birds among ornithologists in Europe. The Council of the new organisation is composed of sixteen senior figures in European ornithology, including Jacques Blondel as President, Andreas Helbig as Secretary, Lukas Jenni as Treasurer, and Peter Jones as Editor of the EOU's journal, *Avian Science*. As well as Peter, the other British member of Council is Chris Perrins. The EOU will organise biennial conferences, the next one being in Groningen, The Netherlands, on 22nd-26th August 2001. *Avian Science* will be published in English, and will contain significant original papers and occasional review articles of international interest on all aspects of ornithology, both theoretical and applied, but with a primary focus on the biology of European species. The first two issues will appear in the latter part of 2001, with four issues per year thereafter.

For more information, and membership details, contact Istvan Horvath, Fridolinsgasse 7, CH-4313 Mohlin, Switzerland (e-mail: istvan.horvath@gvm-ag.ch) or visit the website at www.eou.at

Fire in the Falklands

Bad news: On 12th January 2001, a blaze was accidentally started by HM Forces trying to remove Argentine ordnance on South Jason Island in the Falklands. The fire raged for five days. This island is home to an extremely important seabird colony, including three-quarters of the world's Black-browed Albatrosses *Diomedea melanophris*, as well as large numbers of Rockhopper Penguins *Eudyptes chrysocome*.

Good news: One month later, a team from Falklands Conservation managed to land on the remote island, and found that the destruction was less than originally feared (although owing to a lack of baseline data, true losses will never be known). Approximately 90% of the vitally important Tussac Grass *Parodiochloa flabelatta* has been badly affected, although, because the fire swept through so quickly, there is a chance of regrowth.

The main concern is now the steadily burning peat banks on the island's south coast, which could burn for several months since there is no satisfactory way of extinguishing them. This could lead to severe erosion in the future. Meanwhile, the RSPB is requesting that the Ministry of Defence hold an enquiry and is seeking assurances that such an accident is not likely to occur in future. For further information visit Falklands Conservation website: www.falklands-nature.demon.co.uk

From Albatrosses to Hummingbirds

Following yet another successful British Birdwatching Fair at Rutland Water, in August 2000, BirdLife International was presented with a cheque for £122,000 for its *Save The Albatross Campaign*. This campaign aims to protect one of the world's largest flying birds, the Wandering Albatross *Diomedea exulans*. Since 1994, the number of globally threatened albatross and petrel species has increased from 32 to 55, with 16 species of albatross now threatened with worldwide extinction compared with just three in 1994. The money that has been raised will be used to fund a global campaign over the next two years. Co-ordinated by BirdLife South Africa, the campaign will focus on raising public awareness of the plight of the world's albatrosses, and lobbying governments and the fishing industry to adopt sustainable fishing practices.

In 2001, the Bird Fair will again be held at Egleton Nature Reserve, Rutland Water, on 17th-19th August. This year, the BirdLife campaign is *Eastern Cuba: Saving a unique Caribbean wilderness*. Cuba is home to 350 bird species, of which 25 are endemic, including 15 which are classified as globally threatened. These include Zapata Rail *Cyanolimnas cerverai*, Blue-headed Quail-dove *Starnoenas cyanocephala* and Giant Kingbird *Tyrannus cubensis*. Cuba is now the last remaining hope for any surviving Ivory-billed Woodpeckers *Campephilus principalis* and for a still undescribed nightjar *Siphonorhis* sp. Cuba is also home to the world's smallest bird, the Bee Hummingbird *Calypte helenae* which weighs in at only 2 grams – some 5,500 times lighter than the Wandering Albatross. Further details at www.birdfair.org.uk

Black-browed Albatross decline

A recent census of Black-browed Albatrosses *Diomedea melanophris* in the Falkland Islands (where most of the world's population breeds) in October-November 2000 showed that the population has declined dramatically. The number of pairs has now dropped to 382,000, from 458,000 pairs in 1995. Most alarming is the loss of 11,200 pairs at the largest colony, on Steeple Jason Island, one of a chain of nature reserves to the northwest of the islands. The census is part of a 20-month investigation by Falklands Conservation to uncover the reasons for the decline of this species. A major appeal launched to fund the study, supported by the RSPB and the Falkland Islands Government, still urgently needs £10,000 to complete this essential research on a globally threatened species. If you would like to contribute, or to find out more, contact Ann Brown, tel: 0208-343-0831, or e-mail: Abrown@falklands-nature.demon.co.uk

French Bird Festival

The 11th *Festival de l'Oiseau et de la Nature* (Bird and Nature Festival) will take place from 14th to 22nd April 2001 at Abbeville, at the head of the Baie de Somme, in northeast France. The nine-day event comprises a varied programme of about 40 wildlife films (with six prizes awarded by an international jury), exhibitions of wildlife art and photography, nature walks led by expert local guides (covering the Somme estuary and the forest, marshes and clifftops), and boat trips, horse-trekking and canoeing, as well as a special art-and-nature workshop for children and a programme of lectures. Set in an area of outstanding natural beauty, with a woodland reserve, sand dunes, waterways and reedbeds, the Festival is only an hour's drive from Boulogne, and the whole region is particularly good for bird migration.

For further information, contact the organisers (tel. +33 3 22 24 02 02; fax: +33 3 22 31 40 47) or visit the Festival's excellent website: www.festival-oiseau.asso.fr

Phylloscopus *and speed of flight*

About to be published in the British Ornithologists' Union (BOU) journal *Ibis* are two papers that will be of interest to British birders. The first deals in detail with species relationships within the genus *Phylloscopus* (and it will be no surprise that the names Alström and Olsson are among the authors). Particular emphasis is placed on the species pair Yellow-browed Warbler *P. inornatus* and Hume's Warbler *P. humei*, together with the (sub)species *mandellii* and its relationship to the species pair. Included within the paper is a review of all 'new' *Phylloscopus* species that have recently been elevated from subspecies status (nine), or been newly described (three). DNA and playback techniques figure prominently within the paper.

The second paper deals with radar measurements of the speed of birds' flight. The results are presented in an annotated list recording the flight speeds of 139 Western Palearctic species. All measurements have been corrected for the influence of wind, and demonstrate the wide variation within species. Many of the passerines have speeds of around 10-15 m/s, while larger non-passerines are frequently in the 15-20 m/s region. One of the highest speeds recorded was 24.4 m/s for the Mallard *Anas platyrhynchos*.

Full details of *Ibis* are available from BOU, The Natural History Museum, Tring, Hertfordshire HP23 6AP, or at the website: www.bou.org.uk

Reviews

MIGRATION AND INTERNATIONAL CONSERVATION OF WADERS: research and conservation on north Asian, African and European flyways

International Wader Studies 10. 1998.

500 pages. ISSN 1354-9944. Paperback, £35.00.
Copies available from International Wader Study Group, c/o Nunnery Place, Thetford, Norfolk IP24 2PU.

This report is a collection of 54 papers and 22 abstracts from a meeting of the International Wader Study Group in Odessa, Ukraine, in 1992. The main part of the report deals with wader studies in eastern Europe and central/northern Asia. It includes reviews of the conditions in the Arctic from 1988 to 1994, and the numbers of birds consequently seen in winter or on passage; and of the densities of waders in different habitats around the Gulf of Ob, the western overlap zone of Pacific *Pluvialis fulva* and European Golden Plovers *P. apricaria*. Papers on where the six races of Dunlin *Calidris alpina* breed, information on breeding distribution of Nordmann's Greenshank *Tringa guttifer* on Sakhalin and details on the western breeding areas of Pintail Snipe *Gallinago stenura* all whetted the appetite. Throughout there are many references to changing numbers and distribution as a result of land-use changes. Although this report is relatively expensive, any wader enthusiast would dip into it frequently and be rewarded by finding new and valuable information.

Tony Prater

SCHWEIZER BRUTVOGELATLAS: VERBREITUNG DER BRUTVÖGEL IN DER SCHWEIZ UND IM FÜRSTENTUM LIECHTENSTEIN 1993-1996/ATLAS DES OISEAUX NICHEURS DE SUISSE: DISTRIBUTION DES OISEAUX NICHEURS EN SUISSE ET AU LIECHTENSTEIN EN 1993-1996

By Hans Schmid, Roland Luder, Beat Naef-Daenzer, Roman Graf & Niklaus Zbinden. Schweizerische Vogelwarte Sempach, Switzerland, 2000. Maps; photographs; charts; 574 pages. ISBN 3-9521064-5-3. Hardback, CHF 98.

The first atlas of the breeding birds of Switzerland was published 20 years ago (Schifferli, Géroudet & Winkler 1980), covering the years 1972-76. This present *Atlas* covers the period 1993-96 and presents qualitative as well as quantitative results, with considerable analysis. For example, the distribution of each species is indicated altitudinally (by bar charts), and is mapped either by 10-km squares or by individual localities; a separate map compares the distributions in the two surveys, so that changes between the 1990s and the 1970s are very obvious.

This is a massive volume, weighing 3.35 kg, and with its 574 pages measuring 16% larger than our own massive *New Atlas* (Gibbons, Reid & Chapman 1993). In addition to the double-page spread for each species, there are 120 pages of introductory material (in both German and French) and many photographs (including aerial views) giving a very good impression of the topography and habitats available to birds. A nine-page summary in English is very helpful to those of us whose knowledge of German and French would be inadequate.

Instead of the usual decorative line-drawings, this *Atlas* includes a colour photograph of each species, with a short paragraph in English alongside summarising each of the French and German texts.

The 468 10-km squares were covered by almost 1,000 observers (compared with 271 in the 1970s), with 200 breeding species being found (191 in the earlier survey). Three traditional breeding birds were lost between the two surveys: Crested Lark *Galerida cristata*, Lesser Grey Shrike *Lanius minor* and Great Grey Shrike *L. excubitor*. For all species (except the rarest), distribution is shown by height above sea level (by area and by numbers), and, separately, for areas north and south of the main region of the Alps. This shows, for instance, that most Marsh Tits *Parus palustris* occur at 400-800 m a.s.l., whereas most Willow Tits *P. montanus* occur at 1,200-2,000 m.

Most of the bird atlases that have been published are good. Many are excellent. It would be impossible to praise this atlas of the breeding birds of Switzerland and Liechtenstein too highly: it is simply superb.

J. T. R. Sharrock

ALSO RECEIVED

Chris Packham's Back Garden Nature Reserve
By Chris Packham. (New Holland, in association with The Wildlife Trusts, London, 2001. 144pp. ISBN 1-85974-520-2. Hardback, £14.99)

Bird Boxes and Feeders
By Stephen Moss. (New Holland, London, 2001. 80pp. ISBN 1-85974-175-1. Hardback, £12.99)

BADGER: IN DRAMA AND REAL LIFE

By Christopher Kenworthy. BBC Worldwide, London, 2000. 128 pages; numerous black-and-white and colour photographs. ISBN 0 563 53700 0. Paperback, £10.99.

Published to coincide with the second series of the hit BBC drama, this book is a 'must' for all who enjoyed Jerome Flynn in the role of Police Wildlife Liaison Officer Tom McCabe. Surprisingly for a popular spin-off, it strives – and largely successfully – to inform the reader about the very real, and often serious, problems facing our native wildlife. A clever combination of extracts from the fictional storyline is woven with an overview of differing aspects of wildlife crime, themselves given weight by interviews with police officers and investigators involved in real-life cases. The book is well illustrated with photographs from the TV series and from actual cases, and provides an interesting and informative read.

Phil Cannings

THE AURELIAN LEGACY – BRITISH BUTTERFLIES AND THEIR COLLECTORS

By Michael A. Salmon. Harley Books, Colchester, 2000. 432 pages; 42 colour plates; 162 black and white illustrations. ISBN 0-946589-40-2. Hardback, £30.

Biographies of 101 eminent butterfly-collectors and the collecting history of some notable butterflies form the core of this exhaustively researched and handsomely produced book. Although it is rather specialised at times, many collectors were also ornithologists. If you enjoyed Richard and Barbara Mearns' books about bird-collectors and want to broaden your knowledge, it is an absorbing read. It deals with natural history in a real sense – nature and history combined.

Mike Pennington

THRUSHES

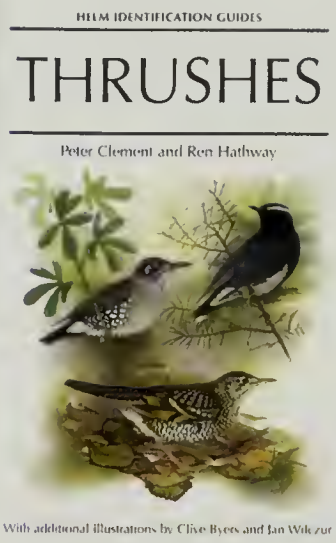
By Peter Clement & Ren Hathway, with additional illustrations by Clive Byers & Jan Wilczur. Christopher Helm, London, 2000. 463 pages; 60 colour plates; maps. ISBN 0-7136-3940-7. Hardback, £35.00.

Thrushes follows the now-familiar format of the excellent Helm Identification Guides. Details of 162 species of 'true thrushes' (covering 16 genera) are provided. The species dealt with cover a wide spectrum, from familiar garden species, through vagrants that many of us dream about discovering in our garden one day, to some of the rarest, most elusive and least-known of all birds. There is something here for everyone.

Within the limits of present knowledge, the text appears to be comprehensive and authoritative. For each species it covers identification, a detailed description, geographical variation, status and distribution, movements, habitat, behaviour (which includes diet), breeding, moult, measurements and, finally, a series of key references. The text is brief for many of the rarer species, often a page or less, although this serves to highlight the gaps in our knowledge. Conversely, the text for Blackbird *Turdus merula* occupies six full pages. Several short introductory chapters deal with a number of general topics, ranging from the historical record to future research and conservation of rare species.

I had a few minor criticisms. For example, I was disappointed to see that, not for the first time, the drawings of tail shapes of typical adult and first-year birds have been wrongly labelled (though the text is correct). I also felt that the treatment of the two different races of Redwing *Turdus iliacus* was rather superficial. But I found nothing to detract significantly from the book as a whole.

For me, however, what really sets this book apart is the artwork. It is simply superb. The



majority of the plates are by Ren Hathway, with the balance provided by Clive Byers and Jan Wilczur. Judging illustrations is a personal thing, but for me Hathway is spot-on most of the time. I particularly enjoyed browsing the plates of North American *Catharus* thrushes, and pondering the subtle differences depicted. I see that he lives in Scilly – perhaps these are his garden dream?

Roger Riddington

ALSO RECEIVED

Bill Oddie's Birding Pack

Containing *Birds of Britain & Ireland*, and a Birding Map. By Bill Oddie. (New Holland, London, 2001. Softback fieldguide, 240pp, ISBN 1-85368-488-0; separate map. £12.99)

Monthly Marathon



Bob Ivost

63. Great Black-headed Gull *Larus ichthyaetus*, Kfar Rupin, Israel, January 2000.

Another gull (Laridae), obviously! My commiserations to the unfortunate participants in this competition who do not immediately jump up and down with excitement over the prospect of yet another gull challenge, assuming, that is, that there are some left.

It may seem, at first glance, that with an image as small as this there is not much prospect of a detailed plumage analysis, but close study reveals a surprising number of clues. While it should never be assumed that additional birds in the background or foreground of mystery photographs are necessarily clues to solving the mystery – sometimes they serve merely as a potentially misleading distraction – the gull lurking in the background of plate 2-1 (repeated here as plate 63) may have helped to determine the first impression of many participants, but let's come back to that later.

With so many gulls on the West Palearctic List to choose from, perhaps the best way to start is by eliminating as many as possible of the contenders. Usually, this process begins with a basic assessment of the bird's size: are we dealing with a small, medium-sized or large gull? In practice, this first step seldom requires more than the most cursory examination, but, when you think about it, size determination of a lone gull in a photograph is usually based primarily on recognition of the type of plumage or the weight of the bill (when visible) as being those characteristic of a gull species belonging to one of the three size groups, respectively small, medium-sized and large. In a photograph like this, where there is nothing alongside the bird to provide even a subliminal clue to its size, and where the plumage is perhaps not so immediately recognisable as being of a type associated with just one particular size category of gull, it may be necessary to make an intuitive guess. So, while this gull clearly is not one of the smaller species – it simply does not look like any of them – it may be wise to keep an open mind as to whether it is a medium-sized or a large gull.



64. 'Monthly Marathon'. Photo no. 176. Twenty-fourth stage in eleventh 'Marathon'. Identify the species. Read the rules (see page 55), then send in your answer *on a postcard* to Monthly Marathon, c/o The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY *or by e-mail* to editor@britishbirds.co.uk, *to arrive by 5th May 2001.*

The most eye-catching plumage feature in this instance is undoubtedly the rather heavily spotted hindneck, especially towards the base, and the well-marked dark patches on each side of the back of the head, contrasting sharply with an apparently unmarked whitish crown. The latter feature is reminiscent of the pattern exhibited by Mediterranean Gull *Larus melanocephalus* in non-breeding

plumages, but that species would never show a strongly streaked or spotted hindneck. Nevertheless, the vague similarity to Mediterranean Gull, echoed also by the bird in the background, which appears to have some sort of a Mediterranean Gull-like dark 'mask' and possibly a dark-tipped pale bill, is a fairly strong pointer to another species: Great Black-headed Gull *L. ichthyaetus*. Immature plumages of this enigmatic species were poorly known by European observers until comparatively recently (Wallace 1973), but since then it has received a lot more attention, thanks mainly to the much-increased activity of European birders in the Middle East. Readers of *British Birds* twenty years ago may remember one of the revelations in Peter Grant's seminal series of papers on the field identification of West Palearetic gulls (*Brit. Birds* 73: 113-158), his explanation of Great Black-headed's unusual sequence of plumages, in some ways more like that of a medium-sized gull than that of one of the large species. The drawings and photographs featured in that article (and the many that have been published in a wide variety of sources since) illustrate the remarkable similarity of the head and wing patterns of immature Great Black-headed to those of the much smaller Mediterranean Gull, although the only time the two species are ever likely to be confused is in competitions like this.

Further scrutiny of our mystery gull suggests that it could well be a Great Black-headed Gull, in first-year plumage. In addition to the dark band crossing the back of the head, it appears to have distinct dark marks on the rearmost ear-coverts which would correspond with Great Black-headed's dark mask; the few visible juvenile wing-coverts look solidly dark-centred, with no suggestion of the variegated markings shown by most of the larger gulls. The upperparts are rather uniformly light grey, but there is a hint of diffuse darker centres to several of the upper scapulars (following the curve of the bird's right 'shoulder'), another feature of many Great Black-headeds in their first winter. Those of us who have had the advantage of having observed Great Black-headed Gulls at the numerous bird-rich fish-ponds in northern Israel in winter may have derived additional clues from the artificial-looking bank, the reflection of a presumed Grey Heron *Ardea cinerea* and the general 'haughty' demeanour of the two gulls.

With everything pointing so strongly to Great Black-headed Gull, there is really no need to go through the tiresome exercise of 'eliminating' all the other big gulls, one by one; the mystery is as good as solved. These first-winter Great Black-headed Gulls were photographed at Kfar Rupin, Israel, in January 2000 by Bob Frost.

This proved one of the more tricky photographs for contestants in recent months, however, with just under half the entrants (48%) correctly naming the mystery bird as a Great Black-headed Gull. A surprising number (28%) opted instead for Common Gull *Larus canus*, while Ring-billed Gull *Larus delawarensis* was the next most popular option (10%). These results have affected a number of the leading contenders. Christer Kalenius is still out in front with an unbroken series now of ten correct answers. He is closely followed by a group of four with nine-in-a-row (involving Peter Lansdown, Andy Mears, Jakob Sunesen and Peter Sunesen), whilst behind them are Jon Holt on eight and Andy Rhodes on seven correct answers.

A sequence of at least 13-in-a-row is the requirement to find a winner of the current saga, so the next three or four rounds may be crucial....

References

Grant, P. J. 1980. Field identification of west Palearctic gulls. Part 3. Audouin's, Herring, Lesser Black-backed, Great Black-backed and Great Black-headed Gulls. *Brit. Birds* 73: 113-158.

Wallace, D. I. M. 1973. Identification of some scarce or difficult west Palearctic species in Iran. *Brit. Birds* 66: 376-390.

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Monthly Marathon Rules - amendment

Please note the following amendment to Rule 2 of the Monthly Marathon Rules:

2. Entries must be sent either by post, each one on a separate postcard, or by e-mail and be received at the British Birds Editorial Office (Monthly Marathon, British Birds Editorial Office, The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY; e-mail: editor@britishbirds.co.uk) by the stated closing date. Every care will be taken, but, even if negligence is involved, no responsibility can be accepted for non-delivery, non-receipt or accidental loss of entries.

Recent reports

Compiled by Barry Nightingale and Anthony McGeehan

This summary of unchecked reports covers the period mid February to 11th March 2001.

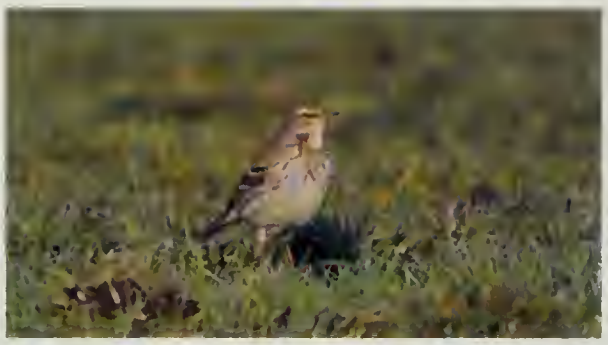
One of the problems arising from the outbreak of foot-and-mouth disease in Britain has been widespread restrictions on access to the countryside (see page 102). This may have led to few unusual records being reported during the period, but a genuine absence of 'interesting' birds is equally possible.

Canada Goose *Branta canadensis* Individual of form '*taverneri*' (with wild Barnacle Geese *B. leucopsis* and Greenland White-fronted Geese *Anser albifrons flavirostris*) near Dunfanaghy (Co. Donegal), to 9th March. **Red-breasted Goose** *Branta ruficollis* Caerlaverock WWT Reserve (Dumfries & Galloway), 15th-17th February. **American Wigeon** *Anas americana* Male still at Rogerstown estuary (Co. Dublin), 7th March. **Black Duck** *Anas rubripes* Still at Achill Island (Co. Clare), to at least 10th March. **Harlequin Duck** *Histrionicus histrionicus* Afon Dyfi (Ceredigion), 25th February. **Sociable Lapwing** *Vanellus gregarius* Private site in Essex, at least 23rd-24th February. **Long-billed Dowitcher** *Limnodromus scolopaceus* Adult still at Belfast Lough RSPB Reserve (Co. Down), to 8th March. **Bonaparte's Gull** *Larus philadelphia* Adult still at Hinckley Point (Somerset), until 23rd February. **'Kumlien's Gull'** *Larus glaucoides kumlieni* Adult at Killybegs (Co. Donegal), 24th February; two immatures at Derry rubbish tip (Co. Londonderry), 25th February; immature at Belfast rubbish tip, 3rd March. **Ross's Gull** *Rhodostethia rosea* Peterhead (Aberdeen), 4th-5th March. **Great Spotted Cuckoo** *Clamator glandarius* Undisclosed site in Kent, 7th March. **Bohemian Waxwing** *Bombycilla garrulus* Still small scattered flocks in Northern Ireland/Dublin, largest being of 25 at Greenisland (Co. Antrim) on 10th March. **Dark-throated Thrush** *Turdus ruficollis* One of black-throated race *atrogularis* near Cheltenham (Gloucestershire), 23rd February. **Red-billed Chough** *Pyrrhocorax pyrrhocorax* St Agnes (Scilly), 28th February to 4th March. **European Serin** *Serinus serinus* East Prawle (Devon), 24th-26th February. **Pine Bunting** *Emberiza leucocephalos* Filey NCCP (North Yorkshire), 4th March.



Gary Bellingham

65. Bonaparte's Gull *Larus philadelphia*, Hinckley Point, Somerset, February 2001.



Steve Young/Birdwatch

66. Water Pipit *Anthus spinoletta*, Neston, Merseyside, February 2001.



George Reszeter

67. 'Siberian' Chiffchaff *Phylloscopus collybita tristis*, Lower Moors Sewage Works, near Pershore, Worcestershire, February 2001.



Mike Ashforth

68. Mediterranean Gull *Larus melanocephalus*, Scarborough, North Yorkshire, February 2001.

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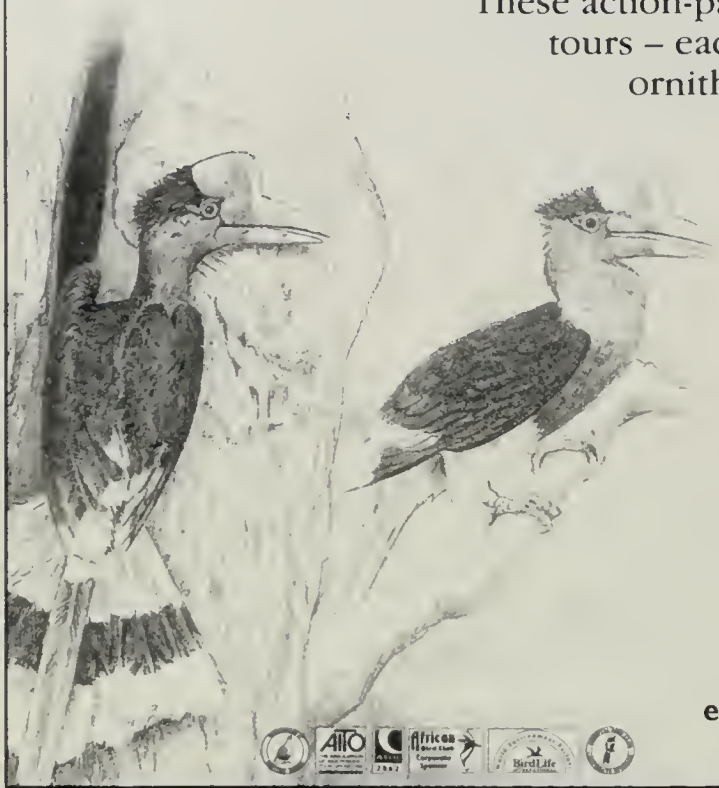
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Established 1907, incorporating *The Zoologist*, established 1843

Published by BB 2000 Limited, trading as 'British Birds'
Registered Office: 4 Henrietta Street, Covent Garden, London WC2E 8SF

ISSN 0007-0335

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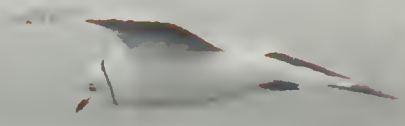
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Identification and taxonomy of Marmora's Warblers

Hadoram Shirihai, Gabriel Gargallo, Andreas J. Helbig, Alan Harris and David Cottridge



Alan Harris

ABSTRACT A major new book on the warblers of the genus *Sylvia* (Shirihai *et al.* 2001) will treat the taxonomy and identification of this intriguing group of passerines in greater depth than has ever been attempted before. Here, we present a shortened adaptation of that book's text dealing with Marmora's Warbler *S. sarda*. Of particular interest is the treatment of that taxon as forming a superspecies consisting of two allospecies, namely Marmora's Warbler *S. [sarda] sarda* and Balearic Warbler *S. [s.] balearica*. These two differ in plumage and vocalisations, as well in other parameters, and their identification is here discussed in detail.

One of the major taxonomic innovations resulting from our studies in recent years of the *Sylvia* warblers is the proposal to treat Marmora's Warbler *S. sarda* as a superspecies comprising two insular allospecies: one endemic to the Balearic Islands, and the second breeding on other western Mediterranean islands. Specific status for the two forms is easily justified by their very different sizes, shapes, coloration, songs, calls and mitochondrial DNA. Playback tests reveal that they do not respond to each other's songs (Gargallo & Prodon, unpubl.).

We have chosen to retain the English name Marmora's Warbler for *sarda*, since it is in common usage and avoids the need to create a new name. We propose the English name Balearic Warbler for the western form, *balearica*. In the following text, these two

English names are used in that context.

The two allospecies are both small, long-tailed *Sylvia* warblers. The larger, greyer Marmora's occurs, syntopically with Dartford Warbler *S. undata*, in Corsica and Sardinia; the smaller, warmer-coloured Balearic Warbler is confined to the Balearic Islands (but does not occur on Menorca). The Balearic Warbler and the Dartford Warbler are largely allopatric, although the two have recently been discovered to occur sympatrically in northeast Mallorca.

Both allospecies inhabit relatively uniform, low, dense cover, from sea level to open montane regions, avoiding taller, more arboreal garrigue. They are less abundant in wooded areas, but are still common if dense, low cover is available.

While Marmora's Warbler is partially migratory, Balearic Warbler is largely sedentary. Most Balearic Warblers remain within their breeding areas throughout the year, but those breeding at higher altitudes descend to lower levels in winter. In winter, Marmora's Warbler is not uncommon in North Africa, and even reaches continental Spain during migration. It is a vagrant to several Central and West European countries, including Britain (*Brit. Birds* 78: 475-481; 86: 513; 87: 554).

Systematics

The two allospecies are closely related to Dartford and Tristram's Warblers *S. deserticola*. DNA studies (Blondel *et al.* 1996; Shirihai *et al.* in prep.; Helbig *et al.* in prep.) suggest that Tristram's, rather than Dartford, is their sister species, but this requires confirmation. Their distinctiveness in comparison with other *Sylvia* warblers has led to the suggestion (e.g. Wolters 1980) that all these species should be grouped within their own subgenus, *Melizophilus*. Phylogenetic analyses demonstrate, however, that these small, long-tailed species constitute only a specialised subgroup within a larger clade of relatively small-bodied *Sylvia* warblers, mostly confined to the Mediterranean region. This latter clade would become paraphyletic by recognising such a restricted subgenus as *Melizophilus*. It is preferable, therefore, to include all small Mediterranean species within this subgenus. Both allospecies are monotypic:

Marmora's Warbler *S. [sarda] sarda* Temminck, 1820. Breeds in Corsica, Sardinia, Pantelleria and on islands in south Ligurian Sea and Tyrrhenian Sea.

Balearic Warbler *S. [sarda] balearica* von Jordans, 1913. Breeds in Balearic Islands (except Menorca).

Field identification

Total length about 12.5 cm; tail/wing ratio about 110% (Marmora's) to about 117% (Balearic); primary projection one-third to one-half of tertial length. Unless otherwise stated, the following text refers to both allospecies.

Potential confusion species

The extreme similarity between juvenile Dartford and juvenile Balearic Warblers creates a major identification problem. In addition, first-winter and adult female Dartford Warblers, when their characteristic orange-brown underparts are less noticeable, are not easily separated from Marmora's and Balearic Warblers. There is also risk of confusion between juvenile Sardinian Warbler *S. melanocephala* and juvenile Marmora's Warbler, and, owing to their general similarity in shape and size, between Marmora's Warbler and Tristram's Warbler (although the plumages of the two are different, and diagnostic). In its poorly patterned first-winter/first-summer, female-like plumage, Cyprus Warbler *S. melanothorax* can be confused with post-juvenile Marmora's Warbler.

Field characters and plumages

Balearic Warbler is very similar in size and structure to Dartford Warbler, being markedly small-bodied, with short wings (and correspondingly tiny primary projection) and obviously long tail (only slightly shorter than that of Dartford). On both Balearic and Dartford Warblers, wing length is similar to, or slightly longer than, the distance between the tip of the wing and the tip of the tail. Marmora's approaches Sardinian Warbler in size and structure, being less long-tailed and delicate than Balearic Warbler, though still smaller than Sardinian; the distance between the tip of the wing and the tip of the tail is usually clearly shorter than the wing length. Both allospecies have a

clearly rounded (graduated) tail, which is slim-looking and characteristically lacks obvious whitish edges and/or tip. The bill is spiky (i.e. long and pointed), especially in the case of Balearic Warbler. Typically, the crown feathers are often raised. The two allospecies frequently utter a conspicuous and diagnostic contact/alarm call: a sharp, low 'tsrek' or 'trt' in the case of Balearic Warbler, and a sharp 'tak' in the case of Marmora's; their calls are very unlike those of Dartford and Sardinian Warblers.

In their typical behaviour (related to their small body size, with prominently long tail and tarsus), restless movements and short flights, Marmora's and Balearic both resemble Dartford Warbler, but are less skulking; the distinctly raised tail (to about 90°) is constantly moved, being wagged up and down, and back and forth. Both often forage on the ground and stand on protruding rocks. Nervous and very inquisitive, they tend to perch in exposed places, surveying the surrounding area. They cling to two branches, one foot on each branch, with their legs characteristically spread wide, although this habit is less pronounced than is the case with Dartford Warbler.

Individual and seasonal variation is limited and, apart from the clear divergence between the two allospecies, there is no appreciable geographical variation. The following descriptions (taken directly from our forthcoming book, with minimal editing) refer to Marmora's, with additional comments for Balearic Warbler.

AUTUMN (fresh)

Adult ♂ Entire upperparts largely dark, slaty blue-grey, with pale earth-brown tinge almost confined to mantle/scapulars; usually sootier-looking head has rather extensive, ill-defined blackish frontal mask, most notable on lores and immediate areas of forehead and ear-coverts. Uniform pale whitish-grey throat broken, mainly on chin and upper throat, by exposed darker medium grey centres (in *balearica* mainly uniform pale greyish-white, producing distinctly white-throated appearance). A vestigial whitish submoustachial stripe is occasionally apparent. Rest of underparts darker, often with a pale pink-buff wash, most intense on breast-sides, flanks and vent, not so strong as in *balearica*. Mid-belly patch whiter cream-buff and undertail-coverts fringed diffusely whitish. Remiges and rectrices blackish grey-brown, fringed grey (primaries clearly tipped whitish-grey). Tertials and wing-coverts largely fringed bluish-grey. Outer tail feathers usually have broader, whiter fringes on outer webs and tips than other plumages (see below). Eye-ring mainly grey and white.

Adult ♀ Resembles adult male; most easily distinguished by more extensively brown-tinged mantle/scapulars, clearly contrasting with greyer crown, rump and uppertail-coverts. Underparts paler grey throughout and less contrastingly patterned, with reduced darker body-sides; usually characteristically richly tinged pale pinkish-buff (more strongly saturated in *balearica*). Compared



Alan Harris

Fig. 1. Field sketches showing jizz and movement of Marmora's Warbler *Sylvia [s.] sarda*.

with male, head less dark, while weakly patterned and less extensive dark frontal mask barely extends above lores. Wing feathers fringed less pure grey, always markedly suffused buff and rusty-brown, notably on tertials and some inner remiges and coverts. Adult females strongly resemble first-winter males (ageing must precede sexing), though some, particularly older and better-patterned females, can strongly approach adult males; sexing in the field is never straightforward.

First-winter ♂/♀ Similar to adult of respective sex, though sexual dimorphism less obvious, both sexes being less pure grey and more extensively tinged buff and rusty-brown above (notably mantle/scapulars). Paler and duller throughout, especially more uniform whitish-grey underparts, which are extensively flecked/tinged whitish-buff (can be very obvious on first-winter females, particularly of *balearica*). Frontal mask less extensive and paler, mainly slaty blackish-grey on male and often indistinct, or almost absent, on female (on both, barely extending to forehead). Retained juvenile remiges narrowly fringed paler buffish/sandy grey-brown (less pure grey) and without, or with indistinct, pale primary tips; retained juvenile rectrices browner, very narrowly fringed and indistinctly tipped sandy-buff (white on adults).

Spring (worn)

Adult ♂/♀ Similar to autumn adults but, with wear and bleaching, entire upperparts more uniform and darker bluish-grey (brown tinge reduced mainly on male) and black frontal mask enhanced. Owing to wear of whitish/buffish tips, underparts more solidly patterned, though still have notable pale buffish pink-brown pigmentation, particularly on female. In *sarda*, throat more uniform pale medium grey, almost concolorous with lores, creating less of a white-throated appearance; in *balearica*, throat still contrastingly paler. Remiges modestly abraded, usually showing typical sexual differences in coloration of feather fringes.

First-summer ♂/♀ Not always possible to age in the field, though majority distinguished by usually distinctive, heavily worn and bleached browner remiges, with faded buffish-brown (rather than mainly grey) fringes. Compared with adults, usually more tinged buff and brown, and duller throughout, with reduced frontal mask.

Bare parts

In the field, the strong, though narrow and pointed-looking bill has blackish culmen and tip, and contrasting pale flesh-pink lower mandible, with slight orange/yellowish hue at base (in *balearica*, yellow/orange colour more distinct and blackish tip much reduced). Tarsus flesh-brown, tinged pinkish-yellow in adults (more pink-straw in spring), younger birds having yellowish pigment reduced; distinctly darker greyish-brown in juvenile *sarda*, but in strong light can appear much more red. Iris colour varies considerably with age: in early autumn, those with a reddish orange-brown iris are clearly adults, while birds with an olive-grey/brown iris are first-winters. Be aware that many first-winters in late autumn may show rather obvious (and confusing) orange-brown iris. In spring, iris generally brighter than in autumn and age differences very limited (some first-summers, mainly females, may still have an obvious olive tinge). Orbital ring purer and deeper red in adults than in first-winters, also slightly brighter in males than in females; in juvenile *sarda* (and many first-winters) reddish coloration less obvious, orbital ring being predominantly darker orange-brown.

Juvenile

Distinctive, and clearly differentiated in the field from other plumages by soft, fluffy feathering; almost uniform dark slaty earth-brown upperparts, with only slightly darker head, breast and tail; rest of underparts paler greyish-brown, tinged cream-buff, usually with darker body-sides (in *balearica*, pinkish-buff tone extensive). For tail pattern and bare parts, see first-winter.

Separating the two allospecies

Although Marmora's and Balearic Warblers are allopatric as breeders, field identification of the two becomes relevant outside the breeding season or in the case of a vagrant. Migrants of each allospecies potentially reach the breeding range of the other (Marmora's is known to occur on migration in the Balearic Islands). The following features separate the two. Both taxa are illustrated in fig. 2 on page 164.

Voice The common contact call of Balearic Warbler is a characteristic 'tsrek', but Marmora's gives a sharp 'tak' (see 'Voice' on page 170). Their songs also differ: that of Balearic is similar to Dartford Warbler's, while that of Marmora's is clearly more liquid (more like that of Common Stonechat *Saxicola torquata*).

Structure Balearic Warbler is similar to Dartford Warbler, while Marmora's is more like Sardinian Warbler (see fig. 12 of Appendix in Shirihai *et al.* 2001). Balearic always appears longer-tailed than Marmora's: the distance between wing tip and tail tip is usually clearly shorter than the wing length on Marmora's Warbler, whereas it is equal, or nearly so, in the case of Balearic.


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Leg colour Juvenile (always) and first-winter (at least in early autumn) Marmora's Warblers have dark, greyish-brown legs (rarely, dull orange-brown), usually quite different from the typical pale orange to orange-brown legs of Balearic Warblers.

Underpart coloration The pale greyish-white throat of Balearic Warbler is clearly demarcated from its darker breast (greyish on males, greyish-brown on females). In spring, male Marmora's Warbler has a purer greyish throat, which is nearly of the same colour and intensity as the breast, and thus lacks the conspicuous white-throated appearance of Balearic Warbler. In autumn, however, both adult and first-winter Marmora's have a clearly mottled throat, with darker grey feather centres appearing between whiter tips. (Underpart coloration is of no value in separation of juveniles of the two allospecies.)

Bill colour Although it is not easily discernible in the field, Balearic tends to have a smaller blackish tip on its lower mandible; on some individuals, especially juveniles, the blackish tip is almost non-existent. The lower mandible of Marmora's, on the other hand, usually has a more extensive and well-marked blackish tip. A pale area at the base of the bill is usually yellowish-orange on Balearic, but pale pinkish on Marmora's.

Fig. 2 (opposite). Marmora's Warbler *Sylvia [sarda] sarda* and Balearic Warbler *S. [s.] balearica*.

Marmora's Warbler Intermediate between Dartford *S. undata* and Sardinian Warblers *S. melanocephala* in general structure. Wings short. Adult male unmistakable, with bluish-grey upperparts, diagnostic blackish frontal mask, grey-mottled whitish-grey throat (uniformly grey in spring), and dusky-grey chest and flanks. First-winter male slightly browner above and paler below, approaching adult female. Female rather distinctly browner olive above, usually lacking bluish hue of male, and facial mask rarely apparent. Juvenile similar to juvenile female Sardinian. Legs pale orange-brown to dark brownish (chiefly first-years); juvenile and most first-winters have darker and browner legs than Balearic Warbler. Iris and orbital ring usually reddish-orange in adults, but duller and, respectively, more brownish-olive and dull orange-brown in juvenile/first-winter. Eye-ring mostly whitish-grey.

1 **Adult male spring** Rather uniform slate with paler belly. Deep orange iris.

2 **Adult male autumn** Still rather uniform slate, but with whitish feather tips partially concealing greyish throat. Some warm brownish edging to wing and mantle.

3 **Adult female autumn** As autumn male, but upperparts and wing more brownish-olive, underparts more extensively tinged pale whitish on belly and throat. Iris deep orange.

4 **First-winter male** As first-winter female, but less warm brown wings, and greyer head and breast. Facial mask noticeable. Iris dull brown-orange.

5 **First-winter female** Brown above, warm fringes to all tertials and greater coverts; underparts wholly tinged pale. Iris brownish-olive, eye-ring buffy.

6 **Juvenile** Suffused dark earth-brown above, head rather uniform, underparts paler and buffier. Iris dark olive-brown.

Balearic Warbler In size and structure strongly resembles Dartford Warbler; rather smaller and longer-tailed than Marmora's, with paler throat and more orange bill base. Adult male has characteristic bluish-grey upperparts, blackish frontal mask, pale whitish-grey throat (at most, only partially darker grey in spring) and dusky buffish-grey chest and flanks. First-winter male slightly browner above and paler below, with less distinct facial mask. Female distinctly browner above and buffier below; bluish hue of males largely indistinct, and facial mask rarely apparent. Juvenile very close to juvenile Dartford, but less buffy and with reduced blackish bill tip. Legs largely pale brownish-orange. Iris and orbital ring mostly reddish-orange in adult, but iris more brownish-olive or orange-brown and orbital ring dull orange in juvenile/first-winter. Eye-ring mostly whitish-grey.

7 **Adult male spring** Small and long-tailed. Chin and throat distinctly paler and whiter than on Marmora's; clear pale-throated impression. Underparts warm buffish-pink, mostly on lower breast and flanks. Bill base more orange. Iris deep orange.

8 **Adult female spring** As male, but distinctly less bluish above, being profusely tinged brown-olive. Facial mask poorly marked and flanks buffier. Iris deep orange.

9 **Adult male autumn** Browner tinge to mantle, ear-coverts and wing feathers; throat mostly uniform pale whitish-grey. Iris deep orange.

10 **Juvenile** Similar to juvenile Marmora's, but warmer, more delicate and long-tailed appearance, with distinctive paler, orange-yellow legs.

The major pitfalls

Separation from juvenile Dartford Warbler

Juvenile Dartford Warbler is not easily distinguished from juveniles of Marmora's and Balearic Warblers, although its calls are diagnostic (see below). Juvenile Marmora's differs from Dartford in its distinctive, more Sardinian-like structure and bare-part coloration, and, less obviously, in its less buffy appearance. The legs and orbital ring of Marmora's are diagnostically darker, lacking any of the obvious orange/reddish and yellowish/pale brown colours characteristic of Dartford Warbler. Marmora's looks distinctly shorter-tailed, with the distance between wing tip and tail tip usually shorter than the wing length (these dimensions are approximately equal on Dartford). Such characteristics, together with its larger size, make Marmora's more likely to be confused with juvenile Sardinian than with Dartford Warbler (see below).

Marmora's lacks the distinctive buffish wash of juvenile Dartford, especially on its underparts, while its upperparts are predominantly slate-brown, almost concolorous with its slightly darker tail (most juvenile Dartfords have paler, grey-brown upperparts, often quite warm, and thus contrasting more obviously with the darker tail). The underparts of Marmora's are usually a distinctly darker, purer greyish-brown, with notably duskier, slaty-brown flanks, vent and breast, emphasising the pale throat (juvenile Dartford is poorly patterned below, with a more prominent, paler buff or sandy-pink suffusion, especially on chin and throat). The eye-ring of Marmora's Warbler is a diagnostic greyish-tinged buff-brown, whereas Dartford's is almost invariably creamy-buff to pinkish-sandy, although this is often not discernible in the field. The lores of Marmora's are dark and concolorous with the rest of the head, whereas those of Dartford are often distinctly paler. Less helpful is the blackish tip to the lower mandible, always very obvious on Dartford and usually reaching, or almost reaching, the distal end of the nostrils, but on Marmora's restricted to the tip and usually covering only the distal half of the area between bill tip and nostrils. As an additional supporting feature, the longest alula feather of Marmora's tends to be fringed (whitish) more evenly along the entire outer web, whereas on Dartford the fringe tends to broaden towards the tip (though there is much overlap).

Juvenile Balearic Warbler is strikingly similar to Dartford. The calls are wholly diagnostic (see 'Voice', below), but there are few other distinctive differences. Bill coloration is very useful: Balearic has the dark tip to the lower mandible paler, less sharply demarcated and greatly restricted (on some individuals almost non-existent), only very rarely extending close to the nostrils, whereas Dartford's bill has a very distinctive blackish tip (see preceding paragraph). Dartford is also diagnostically buffier, both above and below, especially on chin and throat; Balearic has a slightly whiter throat and darker 'face', especially the lores. All plumage differences are, however, difficult to use if direct comparison is not possible. (Differences in the alula, described for Marmora's, apply also to Balearic, but are of limited use.)

Separation from first-winter female Dartford Warbler

Some female Dartford Warblers, particularly less colourful first-winters, have the pinky reddish-brown of the underparts rather subdued. Conversely, some female Balearic Warblers (though fewer Marmora's) have rather pinkish-grey and buffish underparts, but still have the distinctive whitish throat (pale greyish on Marmora's) contrasting with darker breast, part of ear-coverts and lores. Dartford completely lacks this pale-throated appearance, having a distinctive whitish-streaked throat, and is pinkish red-brown on the chin. These features, together with the usually clear differences in underpart coloration, are very useful and distinctive in all post-juvenile plumages. Calls are completely dissimilar (see below).

Less distinctively, the eye-ring of both Balearic and Marmora's Warblers is almost wholly grey-and-white, whereas that of Dartford is mostly pinkish-buff. First-winter Marmora's has a narrow, dark pink or brown orbital ring, whereas that of both Dartford and Balearic is usually a brighter red-orange and is broader.

Separation from juvenile Sardinian Warbler

Juvenile Balearic Warbler, with its distinctively smaller size, long-tailed appearance,



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69 & 70. Balearic Warbler *Sylvia [sarda] balearica*, **adult male spring**, Mallorca, Balearics, April 1992. Pale, whitish-grey throat, buffish underparts, orange bill base, and long tail like Dartford Warbler's *S. undata* aretypical of this allospecies. Bluish upperparts and extensive black frontal mask characteristic of male.



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71 & 72. Balearic Warbler *Sylvia [sarda] balearica*, **adult female spring,** Mallorca, Balearics, May 1999. Pale, greyish-white throat, buffish lower underparts and long-tailed impression typical of Balearic. Facial mask less marked than on male, and no clear bluish-grey hue above. Distinctive adult primaries and primary coverts.

thin pointed bill and yellowish-orange legs, is unlikely to be confused with Sardinian Warbler.

Juvenile Marmora's, however, can be strikingly similar to juvenile, mostly female, Sardinian. The two are separable by the following characters. Marmora's lacks Sardinian's rich whitish tail pattern, having very thin pale edges restricted to the outermost feathers. Sardinian's bill is diagnostic, being stronger, with the basal area of the lower mandible pale grey (horn-pink with yellowish tone on Marmora's). Moreover, Sardinian has a more prominent reddish/orange orbital ring, and invariably a reddish or pinkish-orange (rather than buffish-grey) eye-ring; it also has a more uniform and whiter throat and a very different voice.

OTHER CONFUSION RISKS

Female Sardinian Warbler is fairly similar to post-juvenile Marmora's Warbler, but several features can be used to separate the two. Diagnostically, Sardinian has a distinctive greyish hood sharply contrasting with the brown mantle and scapulars, a pure white throat and a richly patterned tail. In addition, its clearly stronger bill has a different coloration (see above) and, compared with both Balearic and Marmora's Warblers, it has a bulky, short-tailed appearance.

Relatively similar in size and structure, Tristram's Warbler is easily eliminated by its rufous wing-panel, like that of Spectacled Warbler *S. conspicillata*, and its rich white tail pattern (including juveniles). Post-juvenile Tristram's are paler throughout, greyer above, and have a variable amount of orange-pink below (unlike all Marmora's/Balearic plumages).

A serious problem may arise with poorly marked first-winter/first-summer female Cyprus Warblers. These can appear rather similar to Marmora's in the field, and in areas such as Libya and Egypt, where both species are accidental, confusion could occur.

Identification summary

Both Marmora's Warbler and Balearic Warbler are small, long-tailed *Sylvia* warblers with small body, very long or moderately long and slim tail, but very short wings. In size and structure, Balearic Warbler strongly resembles Dartford Warbler, while Marmora's more closely approaches Sardinian Warbler, though slightly smaller and more long-tailed. Adult males are largely unmistakable, but first-winters and females can be fairly similar to female Dartford and Sardinian Warblers. Juveniles very close to juvenile Dartford and also (chiefly Marmora's) similar to juvenile female Sardinian. Calls rather distinctive.

- Fresh males have characteristic bluish-grey upperparts, diagnostic blackish frontal mask, grey-mottled whitish throat and dusky-grey chest and flanks (Marmora's), or mostly uniformly pale whitish-grey throat (Balearic). In spring, Marmora's becomes entirely dark grey below, while Balearic has distinctive pale-throated impression.
- Females similar to males of respective taxon, but duller grey (scarcely bluish), and tinged brownish and buff throughout; underparts more uniform, paler whitish-grey with more extensive pinkish-buff suffusion (especially Balearic); blackish frontal mask relatively noticeable.
- In first-winters, sexual dimorphism is reduced; because of richer brownish tinge, both sexes are more reminiscent of adult females; blackish frontal mask and greyer plumage still prominent on males; Balearic Warbler is distinctly paler and suffused light pinkish-buff below.
- First-winters are strongly patterned below, with paler throat (blotchy dark greyish on Marmora's) and darker breast and body-sides; unlike Dartford Warbler, they lack distinct pinkish red-brown chin and throat. Lores and part of ear-coverts distinctly darker.
- Eye-ring consists of grey and white feathers.
- Juvenile and most first-winter Marmora's have dark pink or brown orbital ring and dark brownish legs, while Balearic has redder/orange orbital ring and orange/yellowish legs.
- Juveniles characterised by predominantly slate-brown upperparts (almost concolorous with head and tail) and warmer underparts, with duskier breast, flanks and vent providing slight contrast with paler throat.
- All plumages characterised by very restricted pale edge to outer web and tip of outer tail feathers, short primary projection and boldly dark-centred tertials.
- Characteristic contact calls are a sharp 'tak' from Marmora's and 'tsrek' from Balearic.

Cyprus Warbler, however, is clearly larger, with a bulkier appearance, and has a longer primary projection, a shorter, fuller tail and a stronger, broad-based bill. Diagnostically, its tail pattern is like that of Sardinian Warbler, with obvious white tips and edges. Its throat is contrastingly purer whitish, and its under-tail-coverts strongly chevron-patterned, with noticeably paler fringes than on Marmora's. Cyprus Warbler can also be eliminated by its characteristically paler, grey-tinged brown-olive upperparts that contrast sharply with the blackish tail, and its obvious and better-defined pale fringes to the wing-coverts; in addition, its tertial fringes are narrower and whiter (slightly wider, more diffuse, and with more grey, pale brown and buff on most Marmora's). The two are very different in their actions and vocalisations.

Voice

Both allospecies have distinctive calls and songs. Marmora's utters a rather short, twittering warble, usually ending with a long, repetitive, rolling trill, recalling Spectacled Warbler or Common Stonechat in tone and tempo. It lacks the rasping component of Dartford Warbler's song, and is less varied, but sweeter. Sardinian Warbler's song is more prolonged and less repetitive, composed of hard 'trr-trr' notes. Confusion with Spectacled Warbler is more likely, but the latter has a more Sardinian-like song structure, though sweeter and less hard, usually interspersed with distinctive 'trrrrrr' contact notes.

The song of Balearic Warbler is very different from, and cannot be confused with, that of Marmora's Warbler. It has a more grating, Dartford-like tone, and is clearly less liquid and clear, although, unlike Dartford, it shares with Marmora's a long, rolling, repetitive final trill. The songs of Marmora's and Balearic Warblers are sufficiently distinct that, in playback experiments, neither responds to the other's song (Gargallo & Prodon, unpubl.). Contact calls are also different: Marmora's has a guttural, hard 'tak', mostly given singly, while Balearic utters a distinct nasal 'tsrek' or 'trt' (both quite different from Dartford). Alarm calls are mostly like rapid series of the contact calls.

Sonograms of the songs and various calls of both allospecies are reproduced in our recent book (Shirihai *et al.* 2001).

Song

Only males sing. Most intense in early breeding season, but extends throughout nesting period; following quiet autumn moult period, when first-years disperse, vocal activity recommences in autumn; song less frequent in winter, but some commonly heard, even in midwinter.

Marmora's Warbler sings a soft, weak, high-pitched warble, the phrases mostly initiated by a short higher-pitched section and continued in repetitive, rolling trill-like sequence. Introductory segment often a fast 'wee' or 'see-wee-se', followed by repetitive whirring and/or stuttering section that may finish in a more tonal ending, or become indefinite and gradually lose pitch. Mean song duration 2.4 seconds (1.5-4.2; n = 24 phrases); mean pauses 3.8 seconds (2.0-6.3; n = 18; two birds, May, Corsica).

Balearic Warbler's song clearly approaches that of Dartford Warbler in general tone, but, like that of Marmora's, is much more repetitive owing mainly to the long final trill. It is short and somewhat grating, but rather sweet, ending with a rolling repetition of stereotyped notes; usually with a rather rasping, abrupt introduction, recalling Dartford; finale often fluctuates, rising and falling noticeably. Mean song duration 2.2 seconds (1.8-2.8; n = 23 phrases); mean pauses 4.1 seconds (2.1-8.1; n = 18; four birds, April, Cabrera, Balearics).

Although the song of Balearic Warbler was noted by von Jordans (1914) as being clearly different from that of Dartford Warbler – and, with practice, it is not difficult to separate from it – the resemblance is still notable, and inexperienced observers invariably confuse the two. There should, however, be no problem in distinguishing Marmora's from Dartford, or distinguishing Balearic from Marmora's (Gargallo & Prodon, unpubl.).

Subsong

More prolonged than full song, softer and more 'luxurious', distinctly sweeter. At least in the case of Balearic Warbler, not rare in autumn and during the breeding season. Individuals can sustain almost continuous subsong for several minutes, very close to an observer.

Common contact calls

These differ markedly between the two allospecies (analysis by Bergmann & Bergmann 1976).

Marmora's commonly gives a hard, guttural 'tak', mostly singly. A rather explosive 'chi', a loud, short and rasping 'chip' and a brief, dry 'tsig' are also reported (Bergmann & Helb 1982; Cramp 1992).

Balearic Warbler has a nasal and rather low 'tsrek' or 'trt', not so hard as the call of Marmora's; it may recall a distant Grey Partridge *Perdix perdix* (von Jordans 1914). Two or three syllables may be involved in the fine structure, and, on Formentera, constant inter-individual differences in call structure are evident (Bergmann & Bergmann 1976). In addition, a low, soft, often double 'swit-swit' or 'duit-duit' is often heard, apparently from very excited individuals.

Alarm calls

Both allospecies utter a hard, rather dry and guttural sequence of 'tk-tk-tk-tk' notes, in long series that change in speed and intensity according to degree of agitation, frequently reaching rattle-like bursts. Otherwise, a drawn-out 'zerr' (Bergmann & Helb 1982); a subdued continuous 'churr-churr', reported from Balearic Warbler when young are threatened (Munn 1931); and a very low 'zeu tzeu', given when Eurasian Sparrowhawk *Accipiter nisus* passed overhead (Corsica; Terrasse & Terrasse 1958).

Juvenile calls

Common contact calls given by young of both allospecies are like calls of adults, but clearly softer. In Corsica, begging call of young out of nest described as a continuous low 'terr' (Terrasse & Terrasse 1958).

Identification in the hand

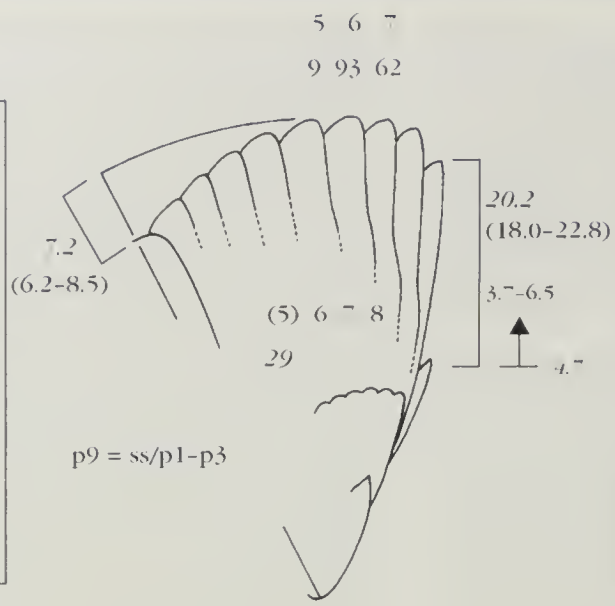
Small, long-tailed *Sylvia* warblers with very delicate bill, short rounded wing and limited white in tail. Males distinctly dark greyish above, with glossy grey head usually having well-marked darker facial mask; Marmora's profusely tinged greyish below; underparts of Balearic paler, more brownish, and with clearly whiter throat than Marmora's. Females warmer and browner overall, with less marked facial mask. Orbital ring and iris reddish-brown or orange in adults, mostly dark olive-grey to dull orange-brown in younger birds.

When separating Marmora's Warbler or Balearic Warbler from similar congeners, it is essential to keep in mind the clear differences between the two allospecies. Dartford and Sardinian Warblers are the only species which should pose any real problems, and these are discussed in detail below. The similarly structured Tristram's Warbler has a diagnostic rufous wing-panel, like that of Spectacled Warbler, and a richly patterned tail. Poorly marked Cyprus Warblers, though potentially confusing in the field, have, among many other features, a very different and distinctive structure (e.g. wing length always over 55 mm, and tail/wing ratio up to 100%; see 'Field identification' on page 161).

Identification of the two allospecies

Balearic Warbler is distinctly smaller than Marmora's and has a rather different wing structure. Wing length alone can be very useful for identification; moreover, plotting wing against tail or bill length reduces the overlap between the two (see figs. 10 & 11 of Appendix in Shirihai *et al.* 2001). Other measurements show more overlap, but can further support identification of problematic individuals: note especially the rather different tail/wing ratio and the distance between p10 and p9. Other useful characters described under 'Field identification' are easily used in the hand.

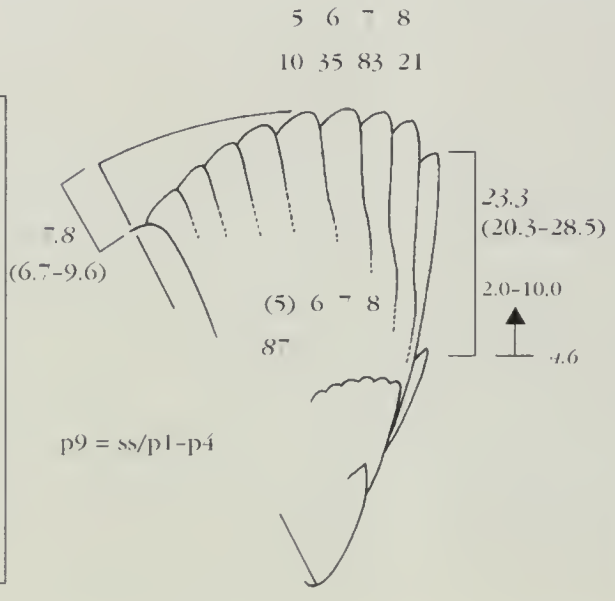
Correct appreciation of age and sex is a prerequisite for species identification (see pages 183-186). Juveniles are often surprisingly easily separated by leg colour (darker and greyer on Marmora's, pale orange-brown on Balearic); furthermore, the orbital ring of juvenile Marmora's tends to be dull brown (or greyish-brown), whereas it is mostly pale orange in Balearic. Juvenile Balearic Warbler is usually warmer above and more buff below compared with Marmora's, but this is generally hard to assess without direct comparison. Most first-winter Marmora's Warblers have legs and orbital ring as on juveniles, making identification straightforward. In autumn, both first-winter and adult male Marmora's have conspicuous dark grey centres to the throat feathers, clearly contrasting with the whitish-grey tips; in spring, the tips disappear through wear and the



p10	25.4	22.5-28.3
p9	5.2	4.0-6.7
p8	0.7	0.0-1.2
p7	0.1	0.0-0.5
p6	0.0	0.0-1.0
p5	0.7	0.0-2.4
p4	2.1	1.0-3.5
p3	3.5	2.0-5.5
p2	4.8	3.0-7.3
p1	6.1	4.2-8.5

Wing	50.8	47.5-53.5
Tail	59.2	54.0-65.0
Tarsus	18.5	17.3-19.3
Bill	13.6	12.3-15.0
T/W ratio	116.2	110.0-125.0
Tail graduation	10.0	7.3-12.3
8p length	38.5	36.5-40.5
Bill depth	2.8	2.6-3.1
Bill width	3.9	3.2-4.4

Balearic Warbler



p10	28.4	24.0-34.9
p9	5.1	3.5-7.5
p8	0.5	0.0-1.5
p7	0.1	0.0-0.5
p6	0.1	0.0-1.5
p5	0.8	0.0-1.6
p4	2.6	1.5-4.0
p3	4.0	3.1-5.5
p2	5.2	4.0-6.5
p1	6.5	4.5-9.0

Wing	55.5	52.0-60.0
Tail	61.4	56.5-66.0
Tarsus	19.5	17.2-20.7
Bill	13.7	12.5-15.9
T/W ratio	110.7	103.5-117.9
Tail graduation	9.3	7.2-13.9
8p length	42.2	40.0-44.0
Bill depth	3.0	2.7-3.5
Bill width	3.8	3.3-5.0

Marmora's Warbler

Fig. 3. Wing formulae and biometrics of Balearic *Sylvia [sarda] balearica* and Marmora's Warblers *S. [s.] sarda*. All measurements are in millimetres.



Fig. 4. Tail patterns of Marmora's *Sylvia [sarda] sarda* and Balearic Warblers *S. [s.] balearica*. Left to right: juvenile, typical adult and extreme adult.



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73-78. Marmora's *Sylvia [sarda] sarda* **and Balearic Warblers** *S. [s.] balearica*. **73, Marmora's Warbler, adult male spring,** Corsica, May 1997. Once whitish feather tips have been worn off, plumage very grey, lacking pale-throated impression of Balearic. Note intense slaty-grey chin and throat, matching head colour. Owing to overall darkness, facial mask becomes less well demarcated (cf. Balearic). Tail clearly shorter than Balearic; distance between wing tip and tail tip shorter than wing length (equal on Balearic). **74, Balearic Warbler, adult male spring,** Cabrera, Balearics, May 1993. Pale-throated impression characteristic of Balearic, as well as distinctly longer tail and clearly paler underparts overall (cf. Marmora's). **75, Marmora's Warbler, adult male,** Corsica, September 1988. Shorter tail and pinkish bill base (instead of orange, cf. plate 74) characteristic of this allospecies (note that some also have orange bill; cf. plate 73). Although largely concealed, some distinctive dark blackish-grey feather bases are visible on central chin and throat sides (cf. plate 76). Upperparts and head purer grey (tinged bluish) than female. **76, Balearic Warbler, adult male,** Formentera, Balearics, November 1991. Slightly buffier underparts, long tail, orange bill base and largely pale, whitish-grey throat (dark grey feather bases at most appearing in submoustachial region; cf. Marmora's). **77, Marmora's Warbler, old adult female,** Corsica, September 1988. Similar to male, but paler below and tinged browner above. Note unusual facial pattern. Some dark blackish-grey feather bases on throat (cf. plate 78). **78, Balearic Warbler, adult female,** Formentera, Balearics, November 1991. Unlike Marmora's, note long tail, uniform pale whitish-grey throat and buffier underparts. Pale facial mask and browner upperparts typical of female.



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79-84. Marmora's *Sylvia [sarda] sarda* and Balearic Warblers *S. [s.] balearica*. 79, Marmora's Warbler, first-winter male, Corsica, September 1988. Browner juvenile primaries and primary coverts, and duller iris. Compare darker and browner legs and feet with those of first-winter Balearic. **80, Balearic Warbler, first-winter male**, Formentera, Balearics, November 1991. Compared with adult, note browner juvenile primary coverts and slightly duller iris. Browner and less prominent facial mask than adult male. **81, Marmora's Warbler, first-winter female,** Corsica, September 1988. Brown iris and no obvious facial mask. Separated from Balearic by shorter tail, greyish-speckled throat and pink bill base. **82, Balearic Warbler, first-winter female,** Formentera, Balearics, November 1991. Compare with Marmora's (plate 81). Olive iris diagnostic of first-winter. Sexed by browner upperparts and faint facial mask (cf. plate 80). **83, Marmora's Warbler, adult male,** Corsica, September 1988. Deep orange-brown iris characteristic of adult (cf. plate 84). **84, Marmora's Warbler, first-winter male,** Corsica, September 1988. Typical first-winter iris (cf. plate 83).

throat is darker grey, at most only slightly paler than the breast and facial mask. On Balearic Warbler, the throat is almost plain, uniform greyish-white, with the feather centres at best only slightly greyer and darker than the tips, thus giving, both in autumn and in spring, a distinctive whitish-throated impression. The same differences, although less marked, also hold for females. Bill colour is a useful supporting criterion (see 'Field identification').

Separation from Dartford Warbler

Following the post-juvenile moult, all Dartford Warblers acquire a characteristic reddish-/pinkish-brown coloration. Although some females, especially first-winters, can be weakly coloured and pose some problems in the field, they are easily separated in the hand, as even poorly coloured individuals have some orange-brown on the chin (see 'Field identification'). In addition, Dartford's eye-ring is mostly pinkish-buff, whereas it is greyish-white in Marmora's and Balearic Warblers.

Juvenile Dartford, however, can be very similar to Balearic and, less so, to Marmora's Warbler (see page 166 for separation of juveniles). Structural differences between Balearic and Dartford are almost non-existent (see wing diagrams and fig.12 of Appendix in Shirihai *et al.* 2001). Most measurements of Marmora's Warbler overlap widely with those of Dartford, but note different tail/wing ratio (in Dartford, maximum 118%) and slight differences in distance between tips of p10 and p9 (up to 24 mm in Dartford).

Separation from juvenile Sardinian Warbler

Although potentially problematic in the field, juvenile Sardinian Warbler is easily separated in the hand. Diagnostically, Sardinian has more white in the tail (especially males, but distinct in both sexes), and a stronger bill with a grey pale area at base of lower mandible (yellowish horn-pink on both Marmora's and Balearic). Note also Sardinian's whiter throat (not so buffy or mottled greyish-buff as on Marmora's, and better demarcated), its darker greyish legs (unlike Balearic; see above) and its reddish/orange orbital ring (unlike Marmora's; see above). Structurally, Sardinian is more different from Balearic: wing much longer (mostly over 53 mm) and tail/wing ratio clearly smaller (up to 115.3%; see also fig.12 of Appendix in Shirihai *et al.* 2001).

Allospecies taxonomy

Marmora's and Balearic Warblers are reliably separated by voice and morphometrics, less so by plumage (primarily underparts) and bare-part coloration. Some, mainly adult females, are difficult to identify by plumage alone.

***S. [s.] sarda* Marmora's Warbler** Monotypic. Central Mediterranean, principally Corsica and Sardinia. Genetically well differentiated from Balearic allospecies; phenotypically also distinctive owing to its different structure (more Sardinian-like), larger overall size, and diagnostic vocalisations; plumage differences moderate, darker and purer grey overall; bare-part coloration also different, especially in juveniles and first-winters. Voice very different: song clearly more liquid than that of *balearica*, recalling Spectacled Warbler or Common Stonechat in tone; common contact call a sharp 'tak'.

[Nomenclature and type-locality: *Sylvia sarda* Temminck, 1820, *Man. Orn.*, ed. 2, 1, p.204—Sardinia, Italy. Recognised by being darker overall and markedly larger than *balearica*. Corsica and Sardinia: 20 ♂♂ wing 55.7 mm (53-59 mm), tail 58.5 mm (54-62 mm); 13 ♀♀ wing 53.5 mm (51-56 mm), tail 57.8 mm (53-60 mm) (Roselaar in Cramp (1992). Bill relatively short, mean of both sexes 12.3 mm (BMNH).]

♂ Upperparts usually darker and more slaty (although mantle is often mixed earth-brown); has slightly better-developed blackish frontal mask (on forehead, lores and ear-coverts). Underparts predominantly purer grey (sometimes tinged pale grey-brown). When worn (spring), throat usually purer grey and, on some, even concolorous with lores and rest of head and upperparts; in fresh plumage, throat pale greyish with distinctive darker blackish-grey blotches, mainly on chin and upper throat. Blackish tip to lower mandible usually more pronounced and extensive than in *balearica*, with pale proximal base less yellowish/orange. Juveniles and most first-winters have darker pink/brown orbital ring and less yellowish/orange legs (more meat-brown) than *balearica*.

♀ Usually clearly differentiated from similar adult male. Correspondingly, purer grey above than

balearica, tinged browner (contrasting) on mantle/scapulars and tertial fringes; also as male, more whitish-grey below (less saturated buff-pinkish). Bare parts as adult male (see above). Both sexes have larger, purer white fringes and tips to outer tail feathers.

Conclusive biometrics Wing 52-60 mm, tail/wing ratio 101-118%.

***S. [s.] balearica* Balearic Warbler** Monotypic. Endemic to Balearic Islands. Genetically well differentiated; phenotypically distinctive owing to smaller size and more long-tailed appearance; plumage differs in pinkish-buff tinge of underparts; also distinctly more orange/yellowish bare-part coloration. Song (clearly closer to Dartford's) a series of characteristic grating notes (largely repetitive, swiftly rising and falling); common contact call a nasal 'tsrek' or 'trt'.

[Nomenclature and type-locality: *Sylvia sarda balearica* von Jordans, 1913, *Falco*, 9, p.43—Dragonera, Mallorca, Balearic Islands. Recognised by being paler with buffish pigmentation below, but mainly because of smaller size than *sarda*. Balearics: 20 ♂♂ wing 50.8 mm (48-54 mm), tail 54.4 mm (52-58 mm); 5 ♀♀ wing 49.9 mm (48-51 mm), tail 53.8 mm (51-57 mm) (Roselaar in Cramp 1992). Bill relatively long, mean of both sexes c.13.6 mm (BMNH).]

♂ Plumage differs from that of similar *sarda* in paler grey upperparts and less contrasting blackish frontal mask (though much overlap); below, constantly more pinkish-buff, mainly on breast and body-sides. In spring, paler throat than *sarda* (more pale whitish-grey) produces distinctive white-throated impression, markedly contrasting with darker lores and breast; in autumn, throat mainly uniformly pale whitish-grey, lacking obvious dark mottling of *sarda*. Base of lower mandible more yellowish/orange, with blackish tip more restricted and less sharply demarcated than on *sarda*. In juveniles and most first-winters, legs clearly paler, yellowish/orange in colour and orbital ring paler orange.

♀ Similar to male (slightly less marked sexual dimorphism than in *sarda*); invariably more saturated pale pinkish-buff on grey-brown breast and body-sides. Bare parts as male.

Conclusive biometrics Wing 47.5-53.5 mm, tail/wing ratio 110-129%.

Geographical variation

No intermediates or intergrades between the allospecies have been found. Among the more widespread *sarda* populations there are no apparent differences, even within discrete populations such as those on Zemba (off Tunisia) and Pantelleria (near Sicily) or those on other small Italian islands.

Other specific relationships

The superspecies has a peculiar, probably relict, distribution in the West Mediterranean region, where the allospecies are endemic on different islands. This may be related to the presence of ecologically and morphologically closely similar species, and thus potentially strong competitors, in northwest Africa (Tristram's and Dartford Warblers) and southwest Europe (Dartford Warbler: Cody 1979). The rich assemblage of matorral-inhabiting species in Corsica and Sardinia, where Marmora's occurs with three continental, syntopic *Sylvia* warblers — Subalpine *S. cantillans*, Dartford and Sardinian — suggests, however, that historical and stochastic factors, or habitat-related differences between continental and insular areas, may play an important role.

The distinctiveness of the two allospecies is emphasised by their respective ecological relations with Dartford Warbler: Marmora's Warbler occurs sympatrically and syntopically with Dartford in Corsica and Sardinia (the two are very different in size and general morphology). In the Balearics, Balearic and Dartford Warblers are largely allopatric (the two are very similar to one another). Dartford may have expanded its range at the expense of Balearic Warbler: it has been claimed that the latter perhaps disappeared from Menorca in parallel with the presumed colonisation by Dartford in the 1970s and early 1980s (Muntaner 1980; but see 'Distribution, general biology and ecology' on page 186). In 1997, however, a small population of Dartford Warblers was discovered in northeast Mallorca, occurring sympatrically with Balearic (J. Sunyer *in litt.*). A detailed study is in progress to clarify ecological relationships between the two.

Moult, age and sex

Marmora's and Balearic Warblers have similar moult strategies. Both undergo partial post-juvenile moult on the breeding grounds, and some individuals undertake a limited partial first pre-nuptial moult. Adult post-nuptial moult is always complete, while adult pre-nuptial moult is the same as first pre-nuptial moult.

Key to ageing and sexing

AUTUMN

Post-juvenile moult *partial: body feathers, median and lesser wing-coverts, most greater coverts, as well as some tertials and rectrices.* **Post-nuptial moult** *complete. Mostly June-September.*

Age

Adult Entire plumage evenly very fresh. Remiges and primary coverts blackish-grey, sharply fringed greyish. Iris bright reddish-orange to brownish-orange. Legs pale orange-brown.

First-winter Primaries and primary coverts brownish-grey, fringed greyish buff-brown to pale greyish-brown. Moulted adult-like greater coverts and remiges (usually tertials) clearly darker and blackish-centred compared with browner juvenile ones. Iris mostly dark olive-brown to yellowish-brown in Marmora's. In Balearic, some rather adult-like, with iris dull brownish-orange, while others have darker iris with distinct olive cast. Legs of Marmora's dark greyish-brown or flesh-brown.

Sex

Adult male On most, lores, forehead and area around eye uniformly blackish-grey, distinctly darker than paler grey rest of head. Mantle lead-grey, slightly to moderately tinged brownish.

Adult female Lores, forehead and area around eye medium grey, slightly to distinctly darker than paler grey to brownish-grey rest of head (darker facial mask usually less uniform, producing less solid appearance). Mantle brownish-grey.

First-winter male Lores, forehead and area around eye blackish-grey mixed with medium grey, distinctly darker than paler grey rest of head. Mantle brownish lead-grey.

First-winter female Lores, forehead and area around eye medium brownish-grey with admixed darker and greyer feathers, moderately darker than brownish-grey rest of head and, unlike on first-winter males, usually matching mantle colour. Mantle medium brownish-grey.

SPRING

Pre-nuptial moult *partial: very limited; some body feathers, rarely some tertials and rectrices. Late September-March.*

Age

Adult Plumage as autumn, but more abraded. Iris bright reddish-orange.

First-winter Plumage as autumn, but very faded and worn (especially juvenile remiges and primary coverts). Iris adult-like in most; a few (largely Marmora's) still have obvious olive cast.

Sex

As autumn but, owing to wear, all have less prominent brownish wash above and better-demarcated and stronger facial mask.

Post-juvenile Partial. Undertaken on breeding grounds in July-September: usually starts from early July (some may start in late June, though this not directly observed), with most in active moult in July-August; most finish mid-late September. Usually involves replacement of all body feathers, most or all greater coverts and alula feathers, as well as tertials and some rectrices (table 1; see also fig. 5 on page 178). Balearic Warbler has a slightly, but significantly, more extensive post-juvenile moult: mean of 1.31 secon-

Table 1. Extent of post-juvenile moult in most relevant feather tracts.
Figures show combined results for 66 individuals examined (44 Marmora's Warblers *Sylvia [sarda] sarda* and 22 Balearic Warblers *S. [s.] balearica*). Range = number of feathers replaced; % all = percentage replacing whole tract; % some = percentage replacing at least some feathers.

	Range	Mean	% all	% some
Tertials	1-3	2.7	77	100
Secondaries	0-6	0.7	8	28
Primaries	0-6	0.4	0	10
Rectrices	0-6	2.2	18	69
Greater coverts	7-10	9.9	89	100
Primary coverts	0-1	0.0	0	1

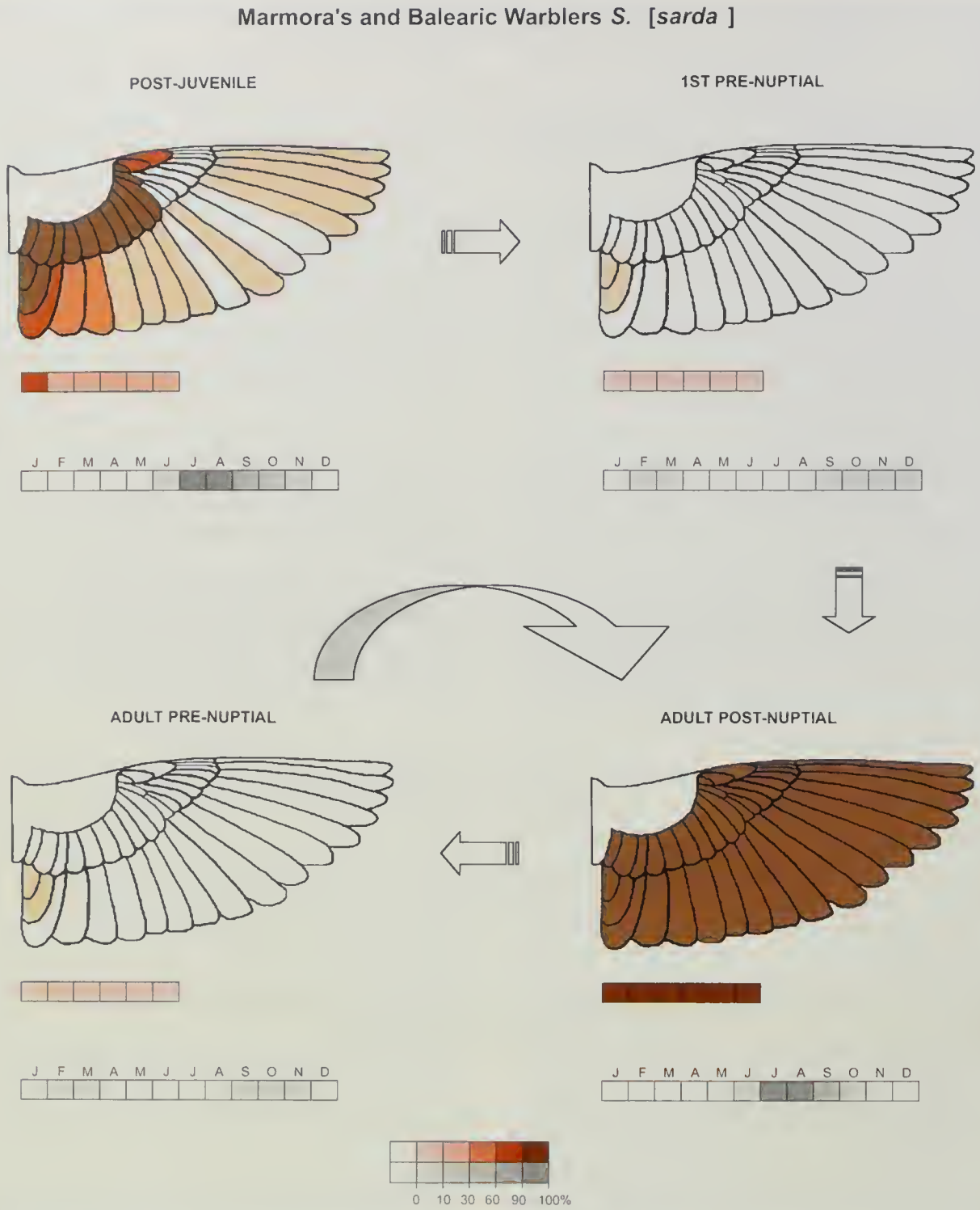


Fig. 5. Moult pattern and strategy of Marmora's *Sylvia [sarda] sarda* and Balearic Warblers *S. [s.] balearica*. See text for explanation.

daries and 1.95 rectrices are replaced (n = 22), as opposed to 0.44 and 1.32 in Marmora's (n = 44). No sexual differences in extent of moult.

Moult commences with some body feathers; greater coverts are usually replaced before tertials, which are moulted following typical adult sequence (s8-s9-s7). Secondaries are often replaced from innermost outwards. Moult of rectrices can start with innermost pair followed by outermost, or occur in any other, more irregular pattern.

First pre-nuptial Partial, but of very limited extent, and probably undertaken by only part of population. Incidence and timing extremely poorly known; according to Cramp (1992), some may moult some wing feathers, tertials and rectrices in January-March. We have no direct observations of birds in active moult during this period.

The possible early moult of some adults



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85 & 86. 85, Marmora's Warbler *Sylvia [sarda] sarda,* **adult male spring,** Corsica, April 1999. Rather easily separated from Balearic Warbler *S. [s.] balearica* in spring. Overall plumage very dark grey, lacking pale-throated impression of Balearic. Yellow-pink bill base (cf. plate 86). Owing to general darkness, facial mask appears less well demarcated (cf. Balearic). **86, Balearic Warbler, adult male spring,** Mallorca, Balearies, May 1992. Unlike Marmora's, Balearic rarely shows a dark grey throat, even when very worn; at most darker, greyish feather bases are evident on sides of chin. Extensive pinkish-buff hue on lower flanks. Distinctive adult primaries and primary coverts (centres blackish-grey with greyish fringes).



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87 & 88. Marmora's Warbler *Sylvia [sarda] sarda*. **87, first-winter, possibly female,** Corsica, September 1988. Browner upperparts and poorly defined facial mask may indicate female. Rather advanced, with dull orange-brown iris approaching adult colour, and dull orange-brown legs. Moult limit between two outermost tertials. **88, first-winter, possibly male,** Corsica, September 1988. Bulkier appearance and shorter tail characteristic of this allospecies. Underparts less buffy and greyer than Balearic, with some blackish-grey feather bases on chin and throat. Bill base pinkish, instead of yellowish-orange, and legs distinctly greyish-brown. Brown juvenile primary coverts contrast with renewed blackish alula and tertials.



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89 & 90. 89, Marmora's Warbler *Sylvia [sarda] sarda*, **juvenile**, Corsica, September 1988. More easily confused with juvenile Sardinian Warbler *S. melanocephala* than with any other *Sylvia* (including Balearic *S. [s] balearica* and Dartford Warblers *S. undata*; cf. plates 92 & 93). Yellowish-pink bill base, slightly thinner bill and reduced white-throated impression best differentiate Marmora's from Sardinian. Longer tail, darker reddish-brown orbital ring, and rather indistinct eye-ring. **90, Sardinian Warbler, juvenile male**, Corsica, September 1988. Pale bluish-grey bill base diagnostic. Broader, stouter bill (sharply tipped blackish), well-demarcated whitish throat, and paler orbital ring and eye-ring (cf. plate 89). Juvenile male more easily identified than females, by having darker, greyer tail and head (cf. plate 89).



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91-93. Juveniles of Marmora's *Sylvia [sarda] sarda*, **Balearic** *S. [s] balearica* **and Dartford Warblers** *S. undata*. **91, Marmora's Warbler,** Corsica, September 1988. Soft body feathers. Greyish wash below, dusky upperparts and shorter tail best differentiate this allospecies from Balearic. **92, Balearic Warbler,** Cabrera, Balearics, June 1993. Buffier underparts, warmer upperparts and long tail separate it from Marmora's. Less buffy below than Dartford, with paler and more restricted dark bill tip. **93, Dartford Warbler,** Corsica, September 1988. Very close to Balearic, but warmer and buffier overall, with more conspicuous and extensive blackish-grey bill tip. Pale lores.

(see below) may be reflected also by some first-winters, as occurs in Sardinian and Dartford Warblers (further study required).

Post-nuptial Complete. Undertaken on breeding grounds in late June-October; starts in late June to mid August (usually July), and finishes from mid September to mid October (Cramp 1992; own data).

Moult starts with replacement of innermost primary, followed by body feathers. Primaries replaced descendently, secondaries ascendantly from s1, and tertials in typical 8-9-7 order (Cramp 1992; own data); moult of rectrices from central ones outwards. Tertials shed after two or, typically, three primaries have been replaced, and finish growth when outermost 4-5 primaries are still growing. Secondaries shed later than first tertial, and their moult is completed at approximately same time as that of primaries. Rectrices replaced more or less at same time as tertials, but moult can be more protracted.

Adult pre-nuptial Partial, of very limited extent, and probably undertaken by only part of population. As with first-winters, circumstances hardly known; according to Cramp (1992), some moult some wing feathers, tertials and rectrices in January-March; in captivity, body moult reported in January (Berthold 1974). We have observed signs of pre-nuptial moult in tertials and rectrices by a few birds in spring, but none was found in active moult.

As with Dartford and Sardinian Warblers, some individuals undertake a supplementary partial moult during the final stages of (or just after) post-nuptial moult. One trapped on 10th September on Mallorca was completing post-nuptial moult (only two outermost primaries and innermost secondary still growing), but was starting to grow central tertial in both wings; this was the only one of six checked that exhibited such a moult pattern. Whether this represents early pre-nuptial moult requires further study.

Ageing

Juvenile Mostly buff-tinged greyish-white below, profusely washed buff and warmer greyish-brown on body-sides and breast. Entire plumage very fresh. Body feathers have typical fluffy appearance. Iris dark olive-brown to dull orange-brown; orbital ring mostly dull pale-orange to dark orange-brown. Legs of Marmora's Warbler dusky brown.

Autumn

Adult Entire plumage evenly very fresh, with no apparent moult limits. Remiges and primary coverts blackish-grey, sharply fringed greyish (slightly less pure on females). Iris bright reddish-orange to brownish-orange; orbital ring pale to deep reddish. Legs pale orange-brown to yellowish-flesh. Thin, pale edges of outermost rectrices pure white, contrasting with blackish-grey centres.

First-winter Primaries and primary coverts brownish-grey, fringed greyish buff-brown to pale greyish-brown. Moulted adult-like greater coverts and remiges (usually tertials, more rarely some secondaries) clearly darker and blackish compared with browner juvenile feathers; very rarely, some retain a few juvenile greater coverts, which are distinctly paler and browner, with softer, looser texture. Juvenile rectrices have less pure white (mostly brownish-white) tips, with paler, browner feather centres (thus less richly patterned). Some retain juvenile alula feathers (usually the longest), which are distinctly less pointed than on adult, with paler, browner centres and less sharp fringes. Iris of Marmora's Warbler mostly darkish olive-brown to yellowish-brown, thus clearly darker and duller than in adults. Ageing of Balearic Warbler by means of iris colour less straightforward, as some first-winters have adult-like irides in early autumn: with practice, however, some can be aged by the duller and less deep orange cast to the iris, and a few, with mostly olive-brown irides, are easily aged. On Marmora's, legs distinctly darker than those of adults: usually darkish grey-brown, but on more advanced individuals more dull yellowish-brown.

Spring

Adult Very similar to autumn adults, but moderately worn. Iris colour deeper and brighter, being predominantly reddish-orange or deep orange-brown. Pre-nuptial moult rather restricted, thus moult limits rarely observed and scarcely apparent.

First-summer Ageing by plumage as in autumn, but juvenile feathers extremely

worn. Some retain juvenile rectrices, which then extremely faded and worn, with distinctly less pure white tips. Iris nearly adult-like in most; very rarely, a few Marmora's still have characteristic olive cast, but otherwise iris colour mostly unreliable for ageing.

Sexing

Autumn

It is best to age the bird correctly first, as the slight, though rather useful, sexual differences can otherwise be masked by age-related differences. (Note that juveniles cannot be sexed.)

Adult ♂ Some individual variation but, with practice and if aged correctly, most can be reliably sexed. Lores, forehead and area around eye form so-called facial mask, which is almost uniform blackish-grey and distinctly darker than paler grey rest of head. Mantle lead-grey, slightly to moderately tinged brownish owing to fresh feather tips. On Marmora's, throat has medium to dark grey centres; on Balearic, throat is pale medium grey.

Adult ♀ Facial mask medium grey, but usually less uniformly coloured than on male, affording less solid appearance, owing to mix of darker and medium grey feathers; mask slightly to distinctly darker than paler grey to brownish-grey rest of head. Mantle brown-grey, contrasting more with paler brownish-grey crown and nape than on adult male. Throat of Marmora's has paler medium grey feather centres; paler grey on Balearic. Flanks more profusely tinged pinkish-buff than on males.

First-winter ♂ Similar to adult male, but facial mask blackish-grey mixed with medium grey (paler and less uniform than adult male), distinctly darker than paler grey rest of head. Mantle slightly more brownish than on adult male, but still showing poor contrast with greyer nape and crown.

First-winter ♀ Mask less dark and more brownish than on adult female: medium brownish-grey with admixed darker and greyer feathers; only moderately darker than paler brownish-grey rest of head and, unlike on first-winter males, usually matches mantle colour, which is medium brownish-grey, usually clearly browner than on adult female. Otherwise as adult female.

Spring

Sexing as in autumn, but take into account the fact that most of the brownish cast above is lost as a result of wear of feather tips; thus, all have purer greyish cast to mantle. Facial mask, on both sexes, usually more pronounced, being uniformly darker than in autumn.

Detailed description by age

The following descriptions apply to Marmora's Warbler but, with regard specifically to ageing, can be applied equally to Balearic Warbler.

Note that, taking account of the entire range of individual variation, it is impossible to sex all birds reliably. With age, both sexes become purer grey and develop a more prominent blackish frontal mask; thus, old females can approach immature males in general coloration and in prominence of the facial mask. To avoid confusion, birds must be aged before sexing.

ADULT

Autumn (fresh): Entire plumage fresh. Remiges and primary coverts blackish-grey, sharply fringed greyish (slightly less pure on females); when fresh, has pale narrow primary tips. Tail blackish, with pale tips and fringes mostly on r1 and, less so, on r5 and r4, and rarely a buffish tip on r3; tips broader and whiter than on juvenile (fig. 4 on page 172). Iris bright reddish-orange to brownish-orange; orbital ring pale to deep reddish. Tarsus flesh-brown, with pinkish-yellow tinge (feet usually distinctly darker). About two-thirds of basal lower mandible predominantly pale flesh-pink, varying from pure pink to yellowish, but restricted mainly to basal cutting edges; tip and culmen generally black.

♂ Head and rest of upperparts largely slaty/ashy blue-grey, tinged/fringed pale earth-brown (almost restricted to mantle and scapulars). Head often sootier (lead-grey) and clearly patterned, with rather extensive blackish frontal mask created by blackish forehead, lores and part of ear-coverts (area proximal to eye). Eye-ring mainly grey and white, often with some dark grey or blackish-grey feathers, usually restricted to upper half of ring. Chin and part of submoustachial stripe white; throat extensively tipped whitish, partially concealing dark grey bases to create pale, flecked and, at times, patchy greyish-white throat area. Rest of underparts largely grey (darker than throat), most intense and with reduced pale fringes on breast (mainly sides), flanks and vent; mid-belly whitish or pale cream-buff; undertail-coverts dark

grey with diffuse whitish fringes; thighs mainly whitish, or whitish-buff and grey. Wing-coverts centred blackish grey-brown (centres of median and lesser coverts largely concealed), with well-defined grey fringes; often lightly tinged cream or pale buff. Tertial centres blackish, sharply delimited by greyish fringes, latter partially or wholly tinged rusty-buff. Alula black, broadly fringed white on outer web of smallest and middle feathers, but narrowly and evenly along entire outer web (cf. Dartford Warbler) of longest feather. Underwing-coverts mostly whitish-grey, and axillaries buffish-white or darker grey; marginal coverts mainly white or grey-white.

♀ Resembles adult male; differentiated by following features. Upperparts, primarily mantle and scapulars, more extensively tinged/fringed brown, forming greater contrast with purer grey crown, back/rump and uppertail-coverts; grey underparts more profusely tinged buff, most pronouncedly on breast-sides, flanks and vent, while pale belly patch is obscured. Wing feathers fringed less pure grey, always markedly suffused buff or rusty-brown, most prominently on inner remiges and coverts. Head usually less dark/sooty, with less extensive frontal mask which is less blackish and confined mainly to lores and proximal ear-coverts, thus notably reduced on forehead (often as grey as crown), and generally fading behind eye. Tail slightly paler, with smaller and less clean whitish tips.

Spring (worn): ♂/♀ Orbital ring brighter red and broader than in autumn; iris usually slightly more deeply coloured, and tarsus more pinkish-straw; bill as autumn. Upperparts more uniformly and intensely bluish-grey (especially males), with strongly reduced brown wash to mantle/scapulars (less so on females) and more strongly patterned head, typically with enhanced black frontal mask. Head clearly darker than rest of upperparts. Underparts darker and greyer owing to wear of whitish or buffish tips: on males, chin, throat and chest concolorous with, or slightly darker than, rest of underparts; greyish underparts of females usually still extensively tinged buff or pale pink-brown, paler overall than males and exhibiting more contrast with darker upperparts. Remiges browner and more abraded than in autumn (distinctly so later in season), primary tips worn; rectrices more worn, but still have small whitish tips. Subsequently, with further wear, most males appear uniformly dark metallic blue-grey above; pale fringes to remiges and rectrices partially worn.

FIRST-WINTERS/SUMMERS

Autumn (first-winter): Juvenile remiges dark brownish-grey, with narrow and rather pale buffish grey-brown fringes (less pure grey than on adults); pale primary tips mostly worn; primary coverts dark grey-brown and narrowly/faintly fringed buff-grey or greyish-brown. Unmoulted juvenile rectrices browner, with less whitish tips (fig. 4). Iris uniform dark olive to pale olive-brown; orbital ring variable, pale red (usual in females) to bright reddish (males). Tarsus predominantly pinkish flesh-brown with limited yellow hue. Bill similar to adult, but basal area of lower mandible paler, and dark culmen and tip less intensely black.

♂ Upperparts medium ashy or bluish slate-grey, moderately tinged warmish olive-brown on scapulars and mantle (as well as wing-coverts). Head darker/sootier than rest of upperparts, contrasting more with paler underparts than on adult male; dark frontal mask less pronounced than on adult, less black, mostly slaty/blackish-grey, and more restricted to lores and area around eye (forehead and rear crown paler grey); rear crown to uppertail-coverts also purer grey, partially tipped paler or whitish-grey. Eye-ring largely grey and white (feathers often grouped separately). Whitish-grey submoustachial stripe greatly obscured and restricted to area proximal to gape, or virtually non-existent; white of chin very small, while entire throat is mostly white, mixed with grey (dark grey bases largely concealed by broad white tips). Rest of underparts moderately dark grey/buff, darker/greyer on breast-sides, more solid buffish-grey on flanks, and slightly richer whitish-buff on rear flanks and part of vent, leaving area of central underbody paler whitish with intermixed grey; undertail-coverts dark grey, with clear whitish fringes. Underwing as adult.

♀ Overall paler/duller than first-winter male and upperparts, notably mantle and scapulars, comparatively more extensively tinged brownish; moulted wing-coverts (mainly greaters) and tertials fringed browner. Head, rump/back and uppertail-coverts largely grey, contrasting with browner rest of upperparts. Dark mask indistinct, sometimes almost absent: usually just a blackish patch around eye, only minimally (little behind eye) on ear-coverts, part of lores, and usually not on forehead. Underparts more uniform and paler, with hardly any contrast between pale whitish-grey throat/upper breast and pale pinkish buff-grey rest of underparts (only indistinct paler belly patch).

Spring (worn; first-summer): ♂/♀ Both sexes similar in general to respective adult plumage. Iris adult-like, or nearly so; very rarely, still with characteristic olive cast. Facial mask enhanced, becoming more blackish and larger, though still less so than in adult plumages; rest of head pure grey. Juvenile remiges, primary coverts and rectrices distinctly duller/browner, with reduced pale buff fringes, and grey limited or absent. With wear, upperparts become greyer and more slaty, especially on male;

generally, only little brown tinge remains (more on females), chiefly on scapulars and mantle; some females still very extensively washed buff-grey. Underparts more solidly coloured but, compared with adults (of respective sex), slightly duller and buffier overall.

JUVENILE

Occurs in May-September in breeding areas. Entire plumage rather fresh, body feathers with characteristic soft, fluffy texture. Upperparts uniformly dark slaty earth-brown, tinged pale buffish; slightly greyer on rear crown, neck/nape and back/rump; head largely concolorous with rest of upperparts (or often appearing slightly darker), but lores and ear-coverts usually warmer. Most of throat diffusely blotched whitish-grey (sometimes with indistinct whitish feathers near gape); rest of underparts mainly pale grey-brown, tinged whitish-buff, darker on body-sides (usually darker/sootier on breast-sides and fore flanks, becoming more buffy to rear) and paler on central areas; undertail-coverts buff-brown, diffusely fringed paler. Wing feathers centred darkish brown, fringed buff-brown, often with rusty tinge (sometimes creating rusty wing-panel). Tail very dark brown or earth-brown; outermost rectrix (r6) narrowly fringed, but rather well-defined sandy-buff on outer web; latter and r5, sometimes also r4 and even r3, diffusely fringed and tipped buffish-cream; r5, r4 and, slightly, r3 also fringed very narrowly with sandy-buff on outer web; central pair diffusely fringed (both webs; fig. 4). Pale bill base slightly more horn-pink than on first-winters (often darker smudge at base, too); culmen and tip dark grey-brown (less blackish). Orbital ring variable, usually relatively darker/brighter red (perhaps mostly males) to greyish red-brown. Eye-ring mainly grey, sometimes with a few buff-grey feathers and variable number of very tiny white ones.

Distribution, general biology and ecology

The distribution of the two allospecies is shown in fig. 6.

Marmora's Warbler

Distribution and movements The main breeding populations of Marmora's Warbler are in Corsica and Sardinia, including offlying islets. The species also breeds on several islands off west Italy (e.g., from north to south, Capraia, Elba, Montecristo, Giglio, Ponza, Ischia and Capri; Walter 1988), on Pantelleria southwest of Sicily (scarce; Iapichino & Massa 1989), and on Zemba, off Tunisia (Cantoni 1963; apparently unconfirmed since). Scarce reports of breeding on Crete and Náxos (Cyclades) are inadequately documented (Handrinos & Akriotis 1997). Although many breeding islands are very close to the mainland, nesting has never been proven in mainland of Spain (historical records apparently result of confusion with Dartford Warbler), France or Italy, nor in Sicily.

Marmora's Warbler is largely resident, with apparently small numbers of both adults and first-winters dispersing or migrating to North Africa and Sicily. Winter visitors are reported in November-March from northeast Algeria and Tunisia, south to the north Saharan oases, and in northwest Libya (common in some winters), where it has been recorded east along the coast to 14°15'E (Bundy 1976). In Sicily, it is a rare or irregular passage migrant and winter visitor (November-March) on coasts and offshore islets (Iapichino & Massa 1989). Its occurrence in Gibraltar and north Morocco (allospecies uncertain) is accidental. Recent ringing studies demonstrate that Marmora's Warbler is a very scarce but regular migrant to the Balearic Islands, at least on Menorca (R. Escandell & O. Garcia *in litt.*). Some 'overshooting' spring migrants reach the Mediterranean coast of France, where a small influx of 11 birds was noted during 5th April to 3rd June 1997 (*Ornithos* 5: 169). Otherwise, some dispersal and altitudinal movements to non-breeding areas occur in Corsica, principally to avoid snow cover (Thibault 1983; Thibault & Bonaccorsi 1999).

Vagrants have reached England and Scotland (see McLoughlin 1992), the mainlands of Spain, France and Italy (Liguria, Calábria), Malta and northwest Egypt; a record from Greece is considered doubtful. In England, a male established territory from 15th May to 22nd July 1982 in South Yorkshire (Lunn 1985).

Habitat and ecology Frequents low and degraded, often rather uniform, Mediterranean maquis consisting of, among other plants, *Juniperus*, *Quercus*, *Erica*, *Calycotome*, *Chamaerops*, *Genista*, *Pistacia* and *Arbutus*; also cliff-top heaths, and rocky slopes on small islands and coastal hillsides. Utilises broad habitat spectrum in Corsica, where it recolonises burnt areas one year after fire (Thibault & Bonaccorsi 1999). In montane Sardinia, high post-breeding density

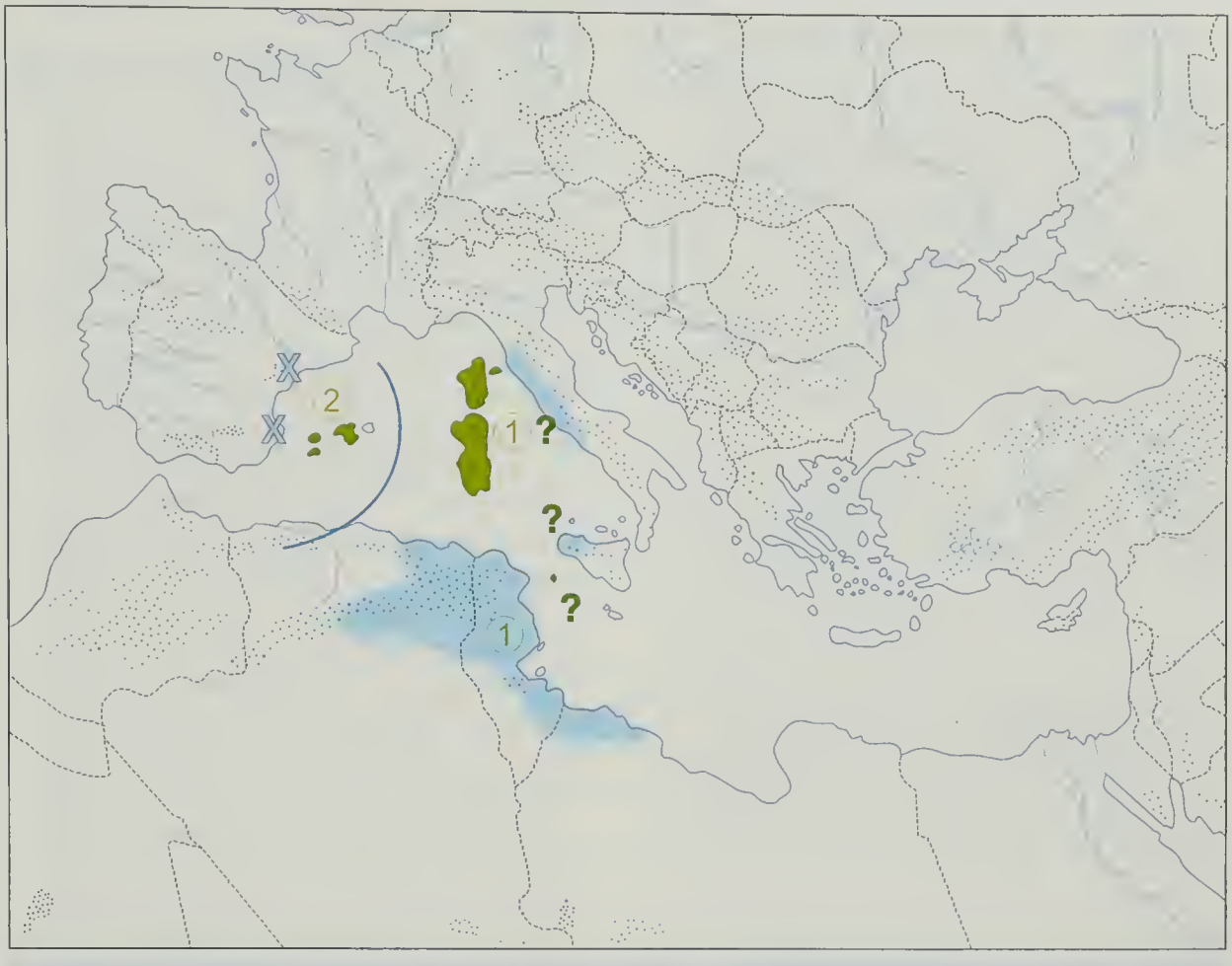


Fig. 6. Distribution of Marmora's Warbler *Sylvia [sarda] sarda* (1) and Balearic Warbler *S. [s.] balearica* (2). Green indicates areas where the species occurs during both the breeding and wintering seasons, while blue indicates the wintering range. Crosses on the Iberian mainland refer to non-breeding records.

recorded in bracken *Pteridium* with scattered brambles *Rubus* and broom *Spartium* shrubs. Favoured vegetation height is always below 2 m, usually less than 1 m; trees are avoided, unless widely scattered. Breeds from sea level to 1800 m in Corsica (Thibault & Bonaccorsi 1999), in post-breeding season ascending to subalpine zone at 2000 m (Thibault 1983). In winter, recorded in flat steppe with abundant scrub (in Libya; Bundy 1976).

Territories overlap with those of Dartford and Sardinian Warblers and of Common Stonechat, but Marmora's largely favours lower, more uniform vegetation than other species. In Corsica, it is more widespread in the interior and at higher elevations than Dartford Warbler (Thibault 1983). Here, Marmora's and the morphologically most similar Dartford are ecologically and behaviourally segregated (Martin & Thibault 1996). In the non-breeding season, Marmora's is reported often to accompany Common Stonechat, perhaps using it as a sentinel.

The diet consists mostly of small arthropods, including small flying insects and their larvae. Nestling food is reported to include lepidopteran caterpillars and pupae, Diptera, Orthoptera, and a large proportion of spiders. Nothing is known of any possible fruit component of the diet in the non-breeding season.

Behaviour and breeding biology In its movements, Marmora's Warbler recalls Wren *Troglodytes troglodytes* and Long-tailed Tit *Aegithalos caudatus*. Skulks, often with tail cocked, and keeps close within cover, but not shy; may tolerate approach to 1 m. Forages in lowest vegetation strata, usually within 1 m of ground; in Sardinia, over 50% of foraging time was spent within 30 cm of ground (Cody & Walter 1976). Spends considerable periods on ground beneath low bushes, sometimes covering long distances by hopping on ground. Also reported to make aerial sallies for flying insects, like a *Muscicapa* flycatcher.

Song usually given from top of low bush, occasionally even from crown of tall tree, but also from inside cover. Song flight similar to that of Common Whitethroat *S. communis*, rising steeply in fluttering flight to 4-7 m above ground, and descending with steep plunge into cover. Song flight given mostly during pair formation, when female is on territory, and during nest-building. In Corsica, pronounced second peak of song activity in September, after breeding and moult completed.

Territorial; monogamous, so far as is known. In some areas, resident birds are territorial throughout the year, and probably remain paired for most of year. In Corsica (only at higher altitude?), territories vacated in winter and re-established in late March-April (Lovaty 1992). Territory size initially reported to be small (0.2-0.5 ha), but individually marked males in Corsica defended territories of about 1 ha early in season and of 2 ha over entire breeding cycle (Lovaty 1992). When feeding nestlings, most adults gather food within about 0.5 ha, but some cover radius of over 150 m, distance being presumably dependent upon food availability. In Sardinia, loose associations of 5-7 birds have been observed in post-breeding season (Diesselhorst 1971).

Male builds unlined 'cock' nests. Breeding nest constructed in bush or dense scrub (in Corsica, prefers *Cistus monspeliensis* and *Erica arborea*: Lovaty 1995; own data) or exceptionally, after wildfire, directly on ground (Dejaive *in litt.*); usually 60-140 cm (mean 95 cm) above ground (Lovaty 1995). Structure consists of a deep, rather robust cup with broadened rim. Both sexes build, and construction can occupy several weeks, at least in early season (Lovaty 1995). Clutch 3-4 eggs, exceptionally five, with mean of first broods 3.7 (n = 22; Corsica); clutches in April contained mostly three, those in May mostly four eggs (Lovaty 1995). Incubation period 12-15 days; nestling period (12) 13 days. Both sexes incubate and care for young. Fledged young remain within territory for up to 50 days, particularly if parents breed again. Either one or (46% of pairs in Corsica) two broods per season. Fledging success 80% of eggs laid (n = 73, Corsica; Lovaty 1995).

No information on mortality or longevity.

Balearic Warbler

Distribution and movements Breeds only in the Balearic Islands. Apart from Menorca, where it is absent, it breeds on all major islands and small islets, provided suitable garrigue/matorral vegetation is available. Maps in many field guides (e.g. Jonsson 1992) indicating breeding on the southeast or east coast of Spain are incorrect; neither Balearic nor Marmora's has ever been proven to breed on the Spanish mainland. Although it has been reported that Balearic Warbler disappeared from Menorca in the 1970s and 1980s, during parallel colonisation of that island by Dartford Warbler (Muntaner 1980), present knowledge suggests that Dartford may have been present there for much longer, while the former status and distribution of Balearic Warbler on Menorca is poorly documented (Gargallo, unpubl.).

The Balearic Warbler is essentially non-migratory. Occasional, perhaps regular, autumn occurrences on east and southeast Spanish coasts appear to involve dispersing first-year birds (Muntaner 1997a); whether any overwinter on the mainland is unknown. On Mallorca, probably descends from highest altitudes during cold spells (Muntaner 1997a). On Formentera, all breeding-season territories were occupied by pairs in the following January (Berthold & Berthold 1973). Hand-reared young from Formentera exhibited some nocturnal restlessness in autumn and, in some cases, early spring, although this was the least pronounced among all *Sylvia* except Spectacled Warbler (Berthold 1973a, 1980).

Habitat and ecology Inhabits Mediterranean scrub, with marked preference for small bushes less than 1-2 m in height, particularly *Cistus*, *Rosmarinus* and *Erica arborea*. Favours stony lower slopes with thick scrub, often near sea, and also juniper and cypress *Cupressus* in areas with scattered pines *Pinus*. Common around the margins of pine woodland, provided scrub layer is sufficiently developed; avoids evergreen woodland, and forested and agricultural areas. Favoured habitats are characterised by rather frequent fires, which may also create new habitat, at least during early stages of succession. Occurs from sea

level to 1300 m on Mallorca (Muntaner 1997a).

Often co-exists with Sardinian Warbler and, mueh less so, with Subalpine Warbler. Aggressive eneounters with other *Sylvia* uneommon (but see Berthold & Berthold 1973). In northeast Mallorea, territories apparently overlap freely with those of Dartford Warbler in areas reeently eolonised by the latter; the density of Dartford, however, is currently very low (Gargallo, Sunyer & Pons, unpubl.).

Balearie Warbler is apparently mostly inseetivorous, but its diet often includes fruit (e.g. *Rhamnus*) during late spring to autumn.

Behaviour and breeding biology

Skulking, but not shy; may permit observer to approach within a few metres. Uses full height of vegetation layer, from ground to tallest trees (*Pinus*, *Cytisus* ete.), for foraging; spends up to 30% of foraging time on ground, hopping up to 200 m. Also flies low over vegetation for up to 100 m. Aerial fly-eatehing behaviour (like *Muscicapa*) quite common.

Territorial; probably monogamous. Resident pairs remain together for mueh of year, if not all year, usually maintaining voeal eontaet. In parts of Formentera, territories rather large, 180-320 m in diameter (Berthold & Berthold 1973); in suitable habitat in Mallorea and Cabrera, territories usually about 1.5-2.5 ha (Gargallo, unpubl.).

Male builds unlined 'eock' nests, as other *Sylvia*. Breeding nest eonstrueted in bush or dense scrub (prefers *Juniperus* on Formentera), 30-125 cm (mean 65 em) above ground. Strueture a deep, robust eup with broadened rim, built by both sexes. Nest-building may oeeupy several weeks, at least in early season. Laying starts an average of six days after nest eompleted, i.e. much later than more northerly-breeding *Sylvia*. Cluteh 2-4 eggs, mean 2.8 (n = 15) on Formentera to 3.3 (n = 9) on Mallorca, i.e. eluteh size mueh smaller than those of Central European *Sylvia*. Ineubation period 12-15 days; nestling period 12 days. Hatchlings have blaekish skin. Both parents feed and care for young. Generally two broods per season.

No information on mortality or longevity.

Population sizes and trends

The population of Marmora's Warbler in Corsiea is estimated at 10,000 breeding pairs (Lovaty 1992), and that in Sardinia must be larger, given extent of suitable habitat. Density of 3.0-4.5 breeding pairs per 10 ha in Corsica (Lovaty 1992) and 2.0-7.7 per 10 ha in Sardinia (Walter 1988).

Balearic Warbler is eommon to abundant in suitable habitat. Density on Formentera is 1.5-2.5 pairs per 10 ha (Berthold & Berthold 1973), and on Cabrera and Mallorea 2.4-3.6 pairs per 10 ha (GG pers. obs.). Total Balearic population estimated at 18,000 (range 14,000-25,000) breeding pairs (Muntaner 1997b).

Urbanisation and tourism-related development are serious problems whieh have led to the destruetion of suitable habitat, partieularly along the eoasts of the larger islands of the Balearics, and may be adversely affeeting populations there (Berthold & Berthold 1973). Nevertheless, much suitable habitat remains, eonsiderable portions of this within proteeted areas, making the Balearic Warbler's survival appear secure at present (Muntaner 1997a).

Aeknowledgments

This article forms the basis of the Marmora's Warbler chapter in the book *The Sylvia Warblers: Handbook for identification and taxonomy of the genus Sylvia* by the authors listed at the head of this paper. The book is published by Christopher Helm/A. & C. Black. The editors of *British Birds* are grateful to the publishers for allowing the reproduction here of the text, illustrations and photographs from that book.

References

Bergmann, H.-H., & Bergmann, G. 1976. Individuelle und inselgeographische Variation von Alarmrufen der Sardengrasmücke *Sylvia sarda*. *Verh. orn. Ges. Bayern* 22: 439–449.

— & Helb, H.-W. 1982. *Stimmen der Vögel Europas*. Munich.

Berthold, P. 1973a. Relationship between migratory restlessness and migration distance in six *Sylvia* species. *Ibis* 115: 594–599.

— 1974. Circannuale Periodik bei Grasmücken (*Sylvia*) III. Periodik der Mauser, der Nachtunruhe und des Körpergewichtes bei mediterranen Arten mit unterschiedlichem Zugverhalten. *J. Orn.* 115: 251–272.

— 1980. Beziehungen zwischen Nachtunruhe und Zugverhalten bei der Brillengrasmücke *Sylvia conspicillata*. *Vogelwarte* 30: 276–277.

— & Berthold, H. 1973. Zur Biologie von *Sylvia sarda balearica* und *Sylvia melanocephala*. *J. Orn.* 114: 79–95.

Blondel, J., Catzeflis, F., & Perret, P. 1996. Molecular phylogeny and the historical biogeography of the

warblers of the genus *Sylvia* (Aves). *J. Evol. Biol.* 9: 871–891.

Bundy, G. 1976. *The Birds of Libya*. BOU Check-list No. 1. London.

Cantoni, J. 1963. Sur la présence de *Sylvia sarda* à l'île de Zemba. *Alauda* 31: 61–63.

Cody, M. L. 1979. Resource allocation patterns in Palearctic warblers (Sylviidae). *Fortschr. Zool.* 25 (2–3): 223–234.

— & Walter, H. 1976. Habitat selection and interspecific interactions among Mediterranean sylviid warblers. *Oikos* 27: 210–238.

Cramp, S. (ed.) 1992. *The Birds of the Western Palearctic*. vol. 6. Oxford.

Diesselhorst, G. 1971. Zur Ökologie von Samtkopfgrasmücke (*Sylvia melanocephala*) und Sardengrasmücke (*Sylvia sarda*) im September in Sardinien. *J. Orn.* 112: 131–137.

Handrinos, G., & Akriotis, T. 1997. *The Birds of Greece*. London.

Helbig, A. J., Seibold, I., & Shirihai, H. In prep. Phylogeny and evolution of the genus *Sylvia*. I. Evidence from mitochondrial DNA sequences. *Ibis*.

Iapichino, C., & Massa, B. 1989. *The Birds of Sicily*. BOU Check-list No. 11. London.

Jonsson, L. 1992. *Birds of Europe with North Africa and the Middle East*. London.

Lovaty, F. 1992. Observations sur le comportement territorial et vocal de la Fauvette sarde (*Sylvia sarda*) durant un cycle de reproduction. *Nos Oiseaux* 41: 463–487.

— 1995. Aspects de la biologie de reproduction de la Fauvette sarde (*Sylvia sarda*) en Corse. *Nos Oiseaux* 43: 61–83.

Lunn, J. 1985. Marmora's Warbler: new to Britain and Ireland. *Brit. Birds* 78: 475–481.

Martin, J.-L., & Thibault, J.-C. 1996. Coexistence in Mediterranean warblers: ecological differences or interspecific territoriality? *J. Biogeogr.* 23: 169–178.

McLoughlin, J. 1992. The Marmora's Warbler in Humberside—the second British record. *Birding World* 5: 216–217.

Munn, P. W. 1931. The birds of the Balearic Islands. *Novit. Zool.* 37: 53–132.

Muntaner, J. 1980. Sur la colonisation récente de l'île de Minorque (Baléares) par la Fauvette pitchou. *Alauda* 48: 185–192.

— 1997a. Curruca Sarda *Sylvia sarda*. In Purroy, F. (ed.), *Atlas de las Aves de España*: 408–409. Madrid.

— 1997b. *Sylvia sarda*, Marmora's Warbler. In Hagemeijer, W., & Blair, M. J. (eds.), *The EBCC Atlas of European Breeding Birds*: 584. London.

Shirihai, H., Gargallo, G., Helbig, A., Harris, A., & Cottridge, S. 2001. *The Sylvia Warblers: Handbook for identification and taxonomy of the genus Sylvia*. London.

—, Helbig, A., Seibold, I., & Gargallo, G. In prep. Phylogeny and evolution of the genus *Sylvia*. II. Phenotypic characters and taxonomy. *Ibis*.

Terrasse, J-F., & Terrasse, M. 1958. Voyage ornithologique en Corse. *Oiseaux France* 8: 8–37.

Thibault, J.-C. 1983. *Les Oiseaux de la Corse*. Paris.

— & Bonaccorsi, G. 1999. *The Birds of Corsica*. BOU Checklist No. 17. Tring.

von Jordans, A. 1914. *Die Vogelfauna Mallorcas mit Berücksichtigung Menorcas und der Pityusen*. Bonn.

Walter, H. 1988. Temporal and spatial dynamics of *Sylvia* warblers in the Tyrrhenis. *Bull. Ecol.* 19: 375–401.

Wolters, H. E. 1980. *Die Vogelarten der Erde*. Bd. 5: 321–400. Hamburg & Berlin.

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Historical and taxonomic review of the Iceland Gull *Larus glaucoides* complex

Robert Y. McGowan and Andrew C. Kitchener

The Iceland Gull *Larus glaucoides* is now generally regarded as comprising three subspecies: *L. g. glaucoides*, which breeds in Greenland, *L. g. kumlieni* ('Kumlien's Gull'), which breeds mostly on Baffin Island, and *L. g. thayeri* ('Thayer's Gull'), which breeds throughout the Canadian High Arctic (fig. 1). Iceland Gull taxa have at various times, however, also been treated as subspecies of Herring Gull *L. argentatus* or Glaucous-winged Gull *L. glaucescens*, or as three separate species. The relationships among the three Iceland Gull taxa have been debated by ornithologists for 180 years, from Sabine (1819) to Chu (1998), without a clear resolution, which gives some idea of the problems presented by this group.

In an earlier paper, Weir *et al.* (1995) reported that the frequency of *kumlieni* among wintering adult Iceland Gulls in the eastern Atlantic had increased substantially during the twentieth century. This change



Reproduced from Weir *et al.* (2000).

Fig. 1. Breeding records for three Iceland Gull *Larus glaucoides* taxa, about 1950-95: *glaucoides* ; *kumlieni* ; *thayeri* . Complete breeding distributions of all three taxa are still uncertain (=?), and a few *thayeri* records are from up to 20 years before 1950. ▼ indicates the main southward thrust of thick, multi-year accretions of pack ice; line of open circles shows postulated southern limit of High Arctic.

prompted us to review historical distributional data for all three Iceland Gull taxa. We suspected that any changes in their respective distributions that could not be explained by changing environmental factors might help to elucidate the relationships among, and the validity of, the three taxa. By carrying out a detailed historical and morphological review of Iceland Gull taxa over the past 200 years, we hoped to develop hypotheses on their relationships that could be tested by molecular studies.

Specimens were routinely collected by members of Royal Navy and other explorations of the Northwest Passage, from 1818 to 1860, which covered almost the entire range of the Iceland Gull. Although only a few of the earliest bird specimens collected still exist, many full descriptions can be found in published expedition reports and zoological literature. It is clear from these studies that most early naturalists were able to distinguish readily between the nominate race of Iceland Gull *L. g. glaucoides* and the larger Glaucous Gull *L. hyperboreus*, a fact which it is important to note when interpreting descriptions from these early accounts.

The most reliable character for defining Iceland Gull taxa is the intensity and extent of wingtip melanism in adults, although this varies more or less continuously from none in *glaucoides*, through the intermediate *kumlieni*, to darkest and most extensive in *thayeri*. A secondary, but less reliable, character involves the iris colour of breeding adults. Details of the differences separating the three forms are given in table 1.

Most records of immature Iceland Gulls had to be excluded from our study owing to the highly variable nature of the plumage of such individuals and the lack of ringed birds of known origin. We then assigned each historical specimen and each individual described in published records to one of our three defined taxa, in order to determine changes in both the breeding and the winter distributions of these taxa over the last two centuries. Historical data were relatively few compared with the availability of more recent information (e.g. post-1950). Further details, including sample sizes, are given in Weir *et al.* (2000). We also examined changes in the distributions of other large gulls in the same region, to determine whether these were due to a common set of environmental or ecological variables.

We found that, until about 1860, nominate *glaucoides* bred from Greenland to the western High Arctic of Canada, but by about 1900 it was essentially confined to Greenland (fig. 2). Until 1860, *thayeri* was known only from the western Canadian High Arctic, but from 1900 to 1950 it was found throughout the High Arctic of Canada and in a small area of northwest Greenland (fig. 3).

At high latitudes in Canada, therefore, *thayeri* had evidently replaced *glaucoides*, with which it was formerly sympatric in the west and with which it probably interbred. The first known *kumlieni* were recorded from west Greenland by the 1850s, and by 1900 the western and northern limits of most of its breeding range in the eastern Canadian Low/High Arctic were known. By

Table 1. Definitions of Iceland Gull *Larus glaucoides* taxa, based on adults only. The melanism score of the primaries is derived from the extent and relative intensity of melanism on the upper surface of the wing.

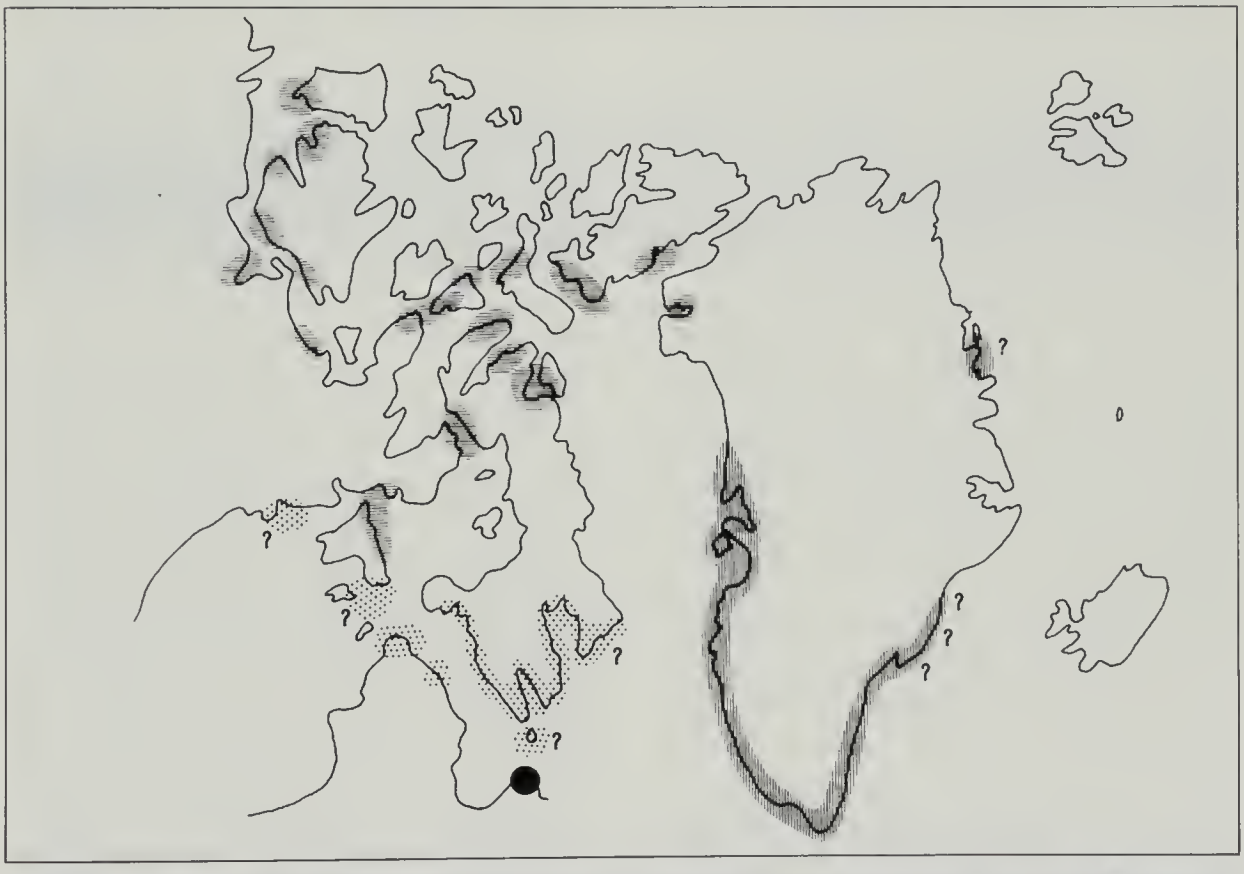
Feature	*thayeri*	*kumlieni*	*glaucoides*
Number of primaries with melanism	(3)4-6	1-5	0
Melanism scores P10-P6	2.0-4.5	0.2-2.5	0
Iris colour of breeding adults	dark (purple/brown speckling)	intermediate	clear greyish-yellow

Sources: Dwight 1906, 1917, 1925; Salomonsen 1950; MacPherson 1961; Fjeldsa & Jensen 1985; Godfrey 1986; Ingolfsson 1967, 1970; Snell 1989, 1991a, b; Weir *et al.* 2000.



Reproduced from Weir *et al.* (2000).

Fig. 2. Known breeding distribution of three Iceland Gull *Larus glaucoides* taxa, in about 1900: *glaucoides*; *kumlieni*; *thayeri*; *glaucoides* or *kumlieni* (taxon not verified)=? The first northerly records of Herring Gull *L. argentatus smithsonianus* are shown as open circles.



Reproduced from Weir *et al.* (2000).

Fig. 3. Breeding records for three Iceland Gull *Larus glaucoides* taxa, about 1950: *glaucoides*; *kumlieni*; *thayeri*; *glaucoides* or *kumlieni* (taxon not verified) shown as filled circle; uncertain or disputed records = ?.

1964, *kumlieni* was recorded breeding in Greenland (not shown in fig.1). The current breeding range of *kumlieni* is restricted, lying between those of *thayeri* and *glaucoides* and overlapping both; *kumlieni* freely interbreeds with *thayeri* (Gaston & Decker 1985; Snell 1989) and probably with *glaucoides*. In contrast to their changing breeding distributions, the winter ranges of *glaucoides* and *thayeri* were found to have changed little since they were first determined, by 1860 and by the 1920s respectively. Winter adult *kumlieni*, however, was unrecorded in the north Atlantic between Greenland and the British Isles until about 1900; it remained rarer than *glaucoides* until 1915 (when samples were 75-100% *glaucoides*), but became progressively more common after 1950 (when samples were 33-80% *kumlieni*).

There is clear evidence that *glaucoides* was replaced by *thayeri* on the breeding grounds, involving an eastward shift of 40° longitude, whereas, in contrast, the distributions of other large gulls of the region shifted mainly northwards. Therefore, whatever factors had caused the eastward movement of *thayeri* were different from those which affected the distributions of other large gulls. We also noted, however, that *thayeri*, as it spread eastwards, hybridised with *glaucoides*, giving rise to the variable form known as *kumlieni*.

Hybrid populations are often distinguished from valid taxa by their inherent instability, both through time and in their geographical distribution. Otte & Endler (1989) set out fairly simple criteria by which unstable, hybrid populations can be recognised. Five of these criteria demonstrate that *kumlieni* is not a valid taxon, but a variable intermediate form resulting from introgressive hybridisation between *thayeri* and *glaucoides* lineages:

1. Specimen data confirm that the postulated parent taxa (*glaucoides* and *thayeri*) formerly bred sympatrically and may have hybridised.
2. Known range contraction by one parent taxon (*glaucoides*) corresponds spatially and temporally to known or apparent range expansion by the other parent taxon (*thayeri*).
3. Non-assortative breeding by the intermediate is known to occur with one parent (i.e. *kumlieni* × *thayeri*), and is strongly suspected to occur with the other.
4. The form *kumlieni* is highly variable in key morphological characters, being intermediate between the two parent taxa in wingtip melanism and iris colour, and this variation tends to be geographical with respect to the parent taxa.
5. The present range of the intermediate is limited, lying between and overlapping in part with those of the parent taxa; in addition, the hybrid has not spread into the High Arctic, where *thayeri* has directly replaced *glaucoides*.

This may not, however, have been the first time that *thayeri* and *kumlieni* have met. Their populations may have advanced and retreated several times in the Arctic in response to climate change during the present and past interglacials. They may not have hybridised at every meeting and, when they did, gene flow may have been in either direction. It appears that the brief systematic ornithology of the Arctic happened to coincide with the most recent hybridisation between *thayeri* and *glaucoides*, and the eastward shift by *thayeri* of about 40° of longitude, followed by further introgression by the intermediate into the remaining population of the Atlantic parent.

Hybrid zones are common ornithological phenomena. In northern regions, most are explained by secondary contact during the present interglacial, though most species do not move far (Hewitt 1989). Hybrids are presumed to be adaptively less fit, and they tend to occur in density troughs between the parental peaks (Barton 1989). In the case of the Iceland Gull, the distributions of both parent taxa and the hybrid form shifted rapidly, but *kumlieni* is now probably more numerous than *thayeri*, and *glaucoides* may be ten times more abundant than either of them.

Other workers (e.g. Dwight 1906; Snell 1989) have suggested that *kumlieni* is an intermediate taxon between *glaucoides* and *thayeri*, and our recent paper (Weir *et al.* 2000) presents strong new evidence to support this. The next step should involve molecular studies to test the hypotheses which we have presented concerning distributional change, hybridisation and continuing introgression.

Acknowledgments

The figures and table in this paper are reproduced from Weir *et al.* (2000) by kind permission of the Editor of *Journal of Zoology*.

References

Barton, N. H. 1989. Founder effect speciation. In Otte, D., & Endler, J. A. (eds.), *Speciation and its Consequences*: 229-256. Sunderland, Massachusetts.

Chu, P. C. 1998. A phylogeny of the gulls (Aves: Larinae) inferred from osteological and integumentary characters. *Cladistics* 14: 1-43.

Dwight, J. D., Jr. 1906. Status and plumages of the white-winged gulls of the genus *Larus*. *Auk* 23: 26-43.

— 1917. The status of 'Thayer's gull *Larus thayeri*'. *Auk* 34: 413-414.

— 1925. The gulls (Laridae) of the world: their plumages, moults, variations, relationships and distribution. *Bull. Amer. Mus. Nat. Hist.* 52: 63-402.

Fjeldså, J., & Jensen, J.-K. 1985. 'Invasion' af Hvidvingede Mager og Kumlien's Mager *Larus glaucoides glaucoides* og *kumlieni* på Nolsø på Faeroene. *Dansk Orn. Foren. Tidsskr.* 79: 103-106.

Gaston, A. J., & Decker, R. 1985. Interbreeding of Thayer's Gull *Larus thayeri* and Kumlien's Gull *Larus glaucoides kumlieni* on Southampton Island, Northwest Territories. *Can. Field. Nat.* 99: 257-259.

Godfrey, W. E. 1986. *The Birds of Canada*. Revised edn. Ottawa.

Hewitt, G. M. 1989. The subdivision of species by hybrid zones. In Otte, D., & Endler, J. A. (eds.), *Speciation and its Consequences*: 85-110. Sunderland, Massachusetts.

Ingolfsson, A. 1967. *The feeding ecology of five species of large gulls (Larus) in Iceland*. D.Phil. thesis, University of Michigan.

— 1970. Hybridization of glaucous gulls *Larus hyperboreus* and herring gulls *Larus argentatus* in Iceland. *Ibis* 112: 340-362.

MacPherson, A. H. 1961. Observations on arctic *Larus* gulls and on the taxonomy of *L. thayeri* Brooks. *Arctic Institute of North America, Technical Papers* 7: 1-40.

Otte, D., & Endler, J. A. (eds.) 1989. *Speciation and its Consequences*. Sunderland, Massachusetts.

Sabine, E. 1819. A memoir on the birds of Greenland, with descriptions and notes of the species observed in the late voyage of discovery in Davis's Straits and Baffin's Bay. *Trans. Linn. Soc. Lond.* 12: 527-559.

Salomonsen, F. 1950. *Grønlands Fugle*. [The Birds of Greenland.] Copenhagen.

Snell, R. R. 1989. Status of *Larus* gulls at Home Bay, Baffin Island. *Colonial Waterbirds* 12: 12-23.

— 1991a. Interspecific allozyme variation among North Atlantic white-headed *Larus* gulls. *Auk* 108: 319-328.

— 1991b. Variably plumaged Icelandic herring gulls reflect founders not hybrids. *Auk* 108: 329-341.

Weir, D. N., Kitchener, A. C., & McGowan, R. Y. 2000. Hybridization and changes in the distribution of Iceland Gulls (*Larus glaucoides/kumlieni/thayeri*). *J. Zool., Lond.* 252: 517-530.

— , McGowan, R. Y., Kitchener, A. C., McOrist, S., Zonfrillo, B., & Heubeck, M. 1995. Iceland Gulls from the 'Braer' disaster, Shetland 1993. *Brit. Birds* 88: 15-25.

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Looking back

Fifty years ago:

'LARGE NUMBERS OF BLACK-TAILED GODWITS IN HANTS. – With reference to the note [*Brit. Birds* 43: 128] on large numbers of Black-tailed Godwits (*Limosa limosa*) at Poole Harbour, Dorset, in March and April, 1949, Dr. C. Suffern writes that about 200 were present at Titchfield Haven, Hants, at the end of December, 1948, and about 300 on January 16th, 1949. Numbers were lower after that date, and in March and April, when the flock at Poole Harbour was largest, there were very few godwits at Titchfield.' (*Brit. Birds* 44: 141, April 1951)

Twenty-five years ago:

[From Ruddy Ducks in Britain, by Robert Hudson] 'The way that the Ruddy Duck [*Oxyura jamaicensis*] has established itself so firmly and within so short a period leads one to assume that it is now a part of the British avifauna for the foreseeable future. It has found acceptable conditions in the west midlands and other western counties, and continues to increase. There is seemingly suitable habitat in Yorkshire, the east midlands, East Anglia and the Home Counties, in the form of lakes, broads, reservoirs, gravel pits and flooded mining subsidence; thus further expansion can be expected.

'The ultimate test for a migratory species introduced to another continent is whether it can tolerate the climatic extremes of its new environment. This is particularly relevant, since there are indications that Britain is on the threshold of a cooler climatic phase. However, in its early days here the Ruddy Duck survived one of the coldest winters this century, so there is no reason at present to suppose that this species will fare less well than many native ones as we move into climatic recession.' (*Brit. Birds* 69: 142, April 1976)

Raptor migration across the Strait of Messina, southern Italy

Andrea Corso



Roberto Gildi

94. Peloritani Mountains and the Strait of Messina, southern Italy.

ABSTRACT The Strait of Messina, at the foot of Italy, is a major migration flyway for many raptors and other species, yet very little has been published on the numbers of birds passing through the area each year. The results of spring counts over the five years 1996-2000 indicate that the Strait is of international importance for seven species of raptor and two species of stork *Ciconia*. The area is also of great interest for its varied avifauna in general, which includes several distinctive Sicilian subspecies.

One of the most important migration flyways for raptors and storks *Ciconia* in Europe is across the Strait of Messina, the narrow channel separating the mainland of southern Italy from Sicily (fig.1). Despite this, there is relatively little published material concerning the birds of the area (Corso *et al.* 1999; Dimarca & Iapichino 1984; Giordano 1991), and that which does exist is now either out of date or involves only limited counts. The site is famed for its raptor and stork passage, but is also notorious as a result of the bird-protection problems encountered there (Agostini

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et al. 1994; Dimarca & Iapichino 1984; Giordano 1991). Sadly, the Strait of Messina is now well known throughout Europe for the levels of raptor-shooting that occur during migration times. In contrast, comparatively little is known of the considerable and varied passage of other migrant birds through the area.

Since 1984, protection surveys have been organised each spring by the World Wide Fund for Nature (WWF) and the Lega Italiana Protezione Uccelli (LIPU). These have been conducted on both sides of the Strait, with the aim of preventing the illegal slaughter of migrating birds, particularly raptors (Giordano 1991; Malara & Iapichino 1987). During these surveys, detailed field observations and counts are also carried out, but there have been no recent publications containing these data. The author has taken part in the surveys since 1990, and since 1996 has acted as scientific supervisor and co-ordinator, as well as being one of the main counters.

The results of counts made since 1996 are presented here. In addition, a number of other papers are currently in preparation. It is hoped that these will encourage further ornithological research in this relatively poorly studied but important part of southern Italy.



Fig. 1. The Strait of Messina, southern Italy, and the raptor migration flyway.

The site

The Strait of Messina separates the Calabria region of southern Italy from Sicily (fig. 1), and at the narrowest point, to the north, is approximately 3 km wide. Many raptors cross the Strait at this point, but some may start their crossing a little or even much farther south, depending on climatic conditions. Two mountain chains form the immediate backdrop to the Strait: the Peloritani Mountains in Sicily and the Aspromonte in Calabria. The observation sites on the Sicilian side, from which all the counts presented in this paper are derived, are located in the Peloritani range, in medium-high to high mountain passes or at peaks (up to 1,127 m above sea level). The landscape here is breathtakingly beautiful, with woodlands and mountains descending steeply to sea level. From the higher peaks, where observations are most frequently carried out when the weather is clear, there is a most impressive panorama. The whole of the northernmost part of Sicily is visible, with the Tyrrhenian Sea to the west and the Ionian Sea to the east. In the far distance are the Eolian Islands, while the landscape to the south of the observer is dominated by the largest volcano in Europe, Mount Etna. The latter is often covered by snow during the spring, and it is against this backdrop that the northbound raptors typically arrive and begin soaring. In strong southerly winds, however, observations are carried out from the most easterly point of Sicily, down on the coast.

Methods

The data presented here (table 1 on page 199) are derived from systematic counts made during spring in each year 1996-2000, on the Sicilian side of the Strait. Observations were carried out daily from 1st April to 27th or 28th May, from sunrise until dusk (approximately 7.00 am to 7.00 pm local time). Counts were made in all weather conditions, since raptor passage may be heavy even in strong rain and mist. In clear, sunny conditions, many raptors take advantage of strong



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95. White Stork *Ciconia ciconia*, Strait of Messina, southern Italy.

thermals and cross the Strait at high altitude, or even make a longer sea-crossing, well to the south of the main observation point, when they are more difficult to observe. During cold weather or rain, they cross the Strait at the shortest point and at a lower altitude.

The surveys are supported by WWF and most of the observations were carried out by the author and four other main counters (C. Cardelli, G. Chiofalo, A. Giordano and D. Ricciardi).

Raptors

Since 1984, 39 species of raptor have been recorded at Messina (Corso *et al.* in prep. a). In addition, two distinctive subspecies have also been seen: Common Buzzard *Buteo buteo* of the north Palearctic race *vulpinus*, commonly referred to as 'Steppe Buzzard' (Corso 1999 and in press); and Peregrine Falcon *Falco peregrinus* of the migratory north Eurasian race *calidus* (Corso in prep. a). Twelve of these raptors are vagrants to this part of Europe, and a further two are only irregular passage migrants. There are also recent unconfirmed reports of Oriental Honey-buzzard *Pernis ptilorhyncus*.

One significant aspect of the raptor passage through the area is the occurrence of species which are rare at other migration sites, or even unique to Messina, such as Amur Falcon *F. amurensis* (Corso & Clark 1998; Corso & Dennis 1998). The vagrants include, among others, Black-shouldered Kite *Elanus caeruleus*, Levant Sparrowhawk *Accipiter brevipes*, Steppe Eagle *Aquila nipalensis*, Eastern Imperial Eagle *A. heliaca*, Lammergeier *Gypaetus barbatus* and Barbary Falcon *F. pelegrinoides*. With regard to the more regular species, the Strait of Messina is the most important European migration flyway for raptors such as Pallid Harrier *Circus macrourus*, Montagu's Harrier *C. pygargus*, Eleonora's Falcon *F. eleonorae* and Long-legged Buzzard *B. rufinus*, while for three others, the Marsh Harrier *C. aeruginosus*, Common Kestrel *F. tinnunculus* and Hobby *F. subbuteo*, the site is the most heavily used flyway within the Western Palearctic (Corso *et al.* in prep. a,b,c.; see also Borioni 1993, Corbi *et al.* 1999, Hein & Kisling 1991, 1992; cf. Bernis 1980, Kjellén 1992, Palma & Beja 1994, Programa Migres 2000, Sagot & Tanguy Le Gac 1984, Shirihai & Christie 1992, Shirihai *et al.* 2000, Sutherland & Brooks 1981, Welch & Welch 1988). Yet another highlight of Messina is the chance to encounter migrating and breeding Lanner Falcons *F. biarmicus* of the subspecies *feldeggii*, a distinctive race of which few birdwatchers in Europe have field experience (Corso 2000).

The number of raptors crossing the Strait is much higher in spring than in autumn (Agostini & Logozzo 1997). Consequently, owing to financial pressures, regular surveys are undertaken only during spring, when the illegal poaching and shooting is most prevalent. Data for the autumn migration period are therefore quite scarce. In spring (table 1), the most numerous species are European Honey-buzzard *P. apivorus* (minimum spring total 16,700, maximum 27,297 and mean of 20,473 during the five-year period consid-

Table 1. Totals of each species of raptor counted at the Strait of Messina, southern Italy, during spring migration 1996-2000.

	1996	1997	1998	1999	2000	Totals
European Honey-buzzard *Pernis apivorus*	16,907	16,700	19,744	21,717	27,297	102,365
Black Kite *Milvus migrans*	653	712	546	678	1,008	3,597
Red Kite *Milvus milvus*	4	2	8	4	6	24
Egyptian Vulture *Neophron percnopterus*	3	4	8	12	9	36
Short-toed Eagle *Circaetus gallicus*	3	4	4	1	2	14
Marsh Harrier *Circus aeruginosus*	1,850	2,971	1,621	2,134	3,074	11,650
Hen Harrier *Circus cyaneus*	81	84	27	25	3	220
Pallid Harrier *Circus macrourus*	35	25	58	37	83	238
Montagu's Harrier *Circus pygargus*	582	418	295	155	866	2,316
Pallid/Montagu's Harrier	159	91	53	33	33	369
Unidentified harriers	82	37	19	28	28	194
Northern Goshawk *Accipiter gentilis*	/	1	/	/	2	3
Eurasian Sparrowhawk *Accipiter nisus*	2	8	5	14	11	40
Common Buzzard *Buteo buteo buteo*	18	70	56	74	67	285
'Steppe Buzzard' *B. b. vulpinus*	12	22	22	19	36	111
Long-legged Buzzard *Buteo rufinus*	6	12	8	9	11	46
Unidentified hawks/buzzards	352	337	149	232	176	1,246
Lesser Spotted Eagle *Aquila pomarina*	1	5	1	/	4	11
Spotted Eagle *Aquila clanga*	2	/	/	/	/	2
Eastern Imperial Eagle *Aquila heliaca*	/	/	/	/	1	1
Golden Eagle *Aquila chrysaetos*	1	6	6	5	4	22
Unidentified *Aquila*	2	1	2	2	/	7
Booted Eagle *Hieraaetus pennatus*	9	5	18	19	16	67
Bonelli's Eagle *Hieraaetus fasciatus*	/	/	/	1	2	3
Osprey *Pandion haliaetus*	10	25	10	19	19	83
Lesser Kestrel *Falco naumanni*	18	46	22	24	24	134
Common Kestrel *Falco tinnunculus*	573	934	672	567	464	3,210
Lesser/Common Kestrel	110	96	59	127	48	440
Red-footed Falcon *Falco vespertinus*	151	303	135	397	1012	1,998
Amur Falcon *Falco amurensis*	/	1	2	2	/	5
Merlin *Falco columbarius*	1	4	3	1	3	11
Hobby *Falco subbuteo*	97	184	119	276	207	883
Eleonora's Falcon *Falco eleonorae*	4	21	24	24	28	101
Lanner Falcon *Falco biarmicus*	/	4	2	1	1	8
Saker Falcon *Falco cherrug*	1	2	2	2	2	9
Peregrine Falcon *Falco peregrinus*	9	10	11	19	25	74
Barbary Falcon *Falco pelegrinoides*	/	/	1	/	/	1
Unidentified falcons	147	114	66	84	70	481
TOTALS	**21,885**	**23,259**	**23,778**	**26,742**	**35,197**	**130,310**

ered here) and Marsh Harrier (minimum 1,621, maximum 3,074 and mean of 2,330). These are followed by Black Kite *Milvus migrans* (min. 653, max. 1,008, mean 719), Common Kestrel (min. 464, max. 934, mean 642) and Montagu's Harrier (min. 155, max. 866, mean 463).

Harriers are usually the first raptors to arrive over the Strait in spring, with migration of Marsh, Hen *C. cyaneus* and Pallid Harriers already underway in mid to late March. Marsh Harrier is usually the most common raptor recorded during the first half of April (with a peak count of 1,200+ on 4th April 1997), and may be observed until the end of May. Adult males are the first to appear, followed by adult females and finally second-calendar-year birds, which are the most abundant. Montagu's Harrier migrates later than the other species of harrier, and peak



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96. Adult female European Honey-buzzard *Pernis apivorus*, Strait of Messina, southern Italy.

passage is most commonly in late April. Black Kite is another species observed early in the season, with peak counts in mid April, although this species too may be encountered as late as the end of May. European Honey-buzzards appear in late April, with few records before 20th April. However, the numbers recorded increase very rapidly to a peak during early May, with often a secondary peak in mid May. Common Kestrel and Lesser Kestrel *F naumanni* are recorded during the whole observation period, the former from as early as mid March. Both species peak in late April or early May, often in association with the main movement of Red-footed Falcons *F vespertinus*. Hobbies appear in early April, with the highest numbers usually encountered in late April, whereas Eleonora's Falcons typically peak a little later, in early to mid May. The rarer species, such as Egyptian Vulture *Neophron percnopterus*, Long-legged Buzzard, 'Steppe Buzzard' and Spotted Eagle *Aquila clanga*, are typically recorded in April, but since 1998 have often been recorded somewhat later, in early to mid May.

On the whole, there seems to have been an increasing number of raptors recorded annually during the study period. This may reflect a real trend for many of the species, but for some it may be a function of improved field-identification skills and knowledge of 'difficult' species (e.g. Pallid Harrier, Peregrine Falcon of the race *calidus* and Common Buzzard of the race *vulpinus*), together with better coverage of the area (which may have resulted in higher counts of the small falcons and the harriers).

Other species

In total, the check-list of the Strait of Messina comprises an impressive 315 species (Corso 1998), a figure which includes a number of extralimital vagrants. The area is nothing less than spectacular for British and north Euro-



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97. Black Kite *Milvus migrans*, Strait of Messina, southern Italy.



98. Mount Etna, Sicily, with European Honey-buzzard *Pernis apivorus*. *Roberto Gildi.*

pean birdwatchers. It is possible to see, in addition to the many raptors, a wide range of Mediterranean species, including, for example, the distinctive Sicilian race of the Rock Partridge *Alectoris graeca whitakeri* (Corso & Starnini in prep.), both the eastern and the western forms of Black-eared Wheatear *Oenanthe hispanica*, Spectacled *Sylvia conspicillata* and Subalpine Warblers *S. cantillans*, both Western Bonelli's *Phylloscopus bonelli* and Eastern Bonelli's Warblers *P. orientalis*, Collared *Ficedula albicollis* and Pied Flycatchers *F. hypoleuca*, and the endemic and unique Sicilian form of the Long-tailed Tit *Aegithalos caudatus siculus* (Corso in prep. c). The site is also one of the most important European flyways for Black *Ciconia nigra* and White Storks *C. ciconia* (Corso *et al.* 1999).

Visiting

The site may be reached easily, via Catania Airport in Sicily or Reggio Calabria Airport in Calabria, and then by bus to Messina town, in northernmost Sicily. Despite the image sometimes portrayed in certain sections of the media, there are absolutely no problems with the notorious 'Mafia', and the local inhabitants are very friendly and hospitable. To take part in the spring WWF survey (the surveys organised by LIPU have been discontinued on the Sicilian side), keen and competent observers are encouraged to contact the author by writing to the address at the end of this paper. Volunteer observers may choose to take part either by helping to protect migrating raptors or by assisting in the co-ordinated observation programme (or, indeed, both). Help is always required for this rewarding work, and this offers perhaps the easiest and cheapest way to visit the area.

Acknowledgments

I should like to thank C. Cardelli, G. Chiofalo, A. Giordano and D. Ricciardi, without whose help this work would not have been possible. I also wish to thank the following for help with data, references and discussion: Giovanni Albarella, Daniele Aliffi, Dan Alon, Ian J. Andrews, Daniele Ardizzone, Carmela Cardelli, Sergio Celesti, Gianluca Chiofalo, Bill Clark, José Luis Copete, Filippo Corso, Andrea De Berardinis, Pete A. Dennis, Roberto Gildi, Anna Giordano, Marcello Grussu, Marco Gustin, Ricard Gutiérrez, Cristoph Hein, Carmelo Iapichino, Renzo Ientile, Ottavio Janni, Claudio Magnifico, Lionel Maumary, Giuliano Monterosso, Giovanni Palumbo, Guido Premuda, Marco Preziosi, Remo Probst, Deborah Ricciardi, Martin J. Riesing, Lucia Romano, Michael Sammut, Nir Sapir, Rudi Schmidt and Amerigo Sivelli. Special thanks go to Reuven Yosef for important help with references.

References

Agostini, N., & Logozzo, D. 1997. Autumn migration of *Accipitriformes* through Italy en route to Africa. *Avocetta* 21: 174-179.

—, Malara, G., Neri, F., & Mollicone, D. 1994. Spring migration of Honey Buzzard at the Straits of Messina: problems concerning protection. *Riv. Ital. Orn.* 63 (2): 187-192.



Valerio Cappello

99. Second-calendar-year male Montagu's Harrier *Circus pygargus*, Strait of Messina, southern Italy, May.



Andrea Corso

100. Adult Booted Eagle *Hieraaetus pennatus* of pale morph, Strait of Messina, southern Italy, April 2000.

Bernis, F. 1980. Las migracion de las aves en el estrecho de Gibraltar (epoca posnupcia). *Aves planeadores* vol. 1. Universidad Complutense, Madrid.

Borioni, M. 1993. *Rapaci sul Conero*. Parco del Conero.

Corbi, F., Pinos, F., Trotta, M., DiLieto, G., & Cascianelli, D. 1999. La migrazione post-riproduttiva dei rapaci diurni nel Promontorio del Circeo (Lazio). *Avocetta* 23: 13.

Corso, A. 1998. Messina crossing. *Birdwatch* 70: 30-33.

— 1999. Dati sulla migrazione della Poiana delle steppe *Buteo buteo vulpinus* in Italia. *Alula* 6: 125-130.

— 2000. Identification of European Lanner. *Birding World* 13: 200-213.

— In press. Nuovi dati sullo status della Poina delle steppe *Buteo buteo vulpinus* in Italia e Europa. *Alula*.

— In prep. a. First data on the migration of Siberian Peregrine *Falco peregrinus calidus* at the Straits of Messina and comments on its status in Italy. *Avocetta*.

— In prep. b. The migration of Pallid Harrier at the Straits of Messina and across the central Mediterranean.

— In prep. c. The Sicilian Long-tailed Tit. A new species?

— & Clark, W. S. 1998. Identification of Amur Falcon. *Birding World* 11: 261-268.

— & Dennis, P. 1998. Amur Falcons in Italy - a new Western Palearctic bird. *Birding World* 11: 259-260.

— & Starnini, L. In prep. The Sicilian Rock Partridge.

—, Giordano, A., Ricciardi, D., Cardelli, C., Celesti, S., Romano, L., & Ientile, R. 1999. La migrazione di Cicogna bianca *Ciconia ciconia* e Cicogna nera *Ciconia nigra* attraverso lo Stretto di Messina. *Avocetta* 23: 55.

— *et al.* In prep. a. The raptor migration through the Straits of Messina, Southern Italy. Results of an 11-year survey.

—, Gustin, M., & Sammut, M. In prep. b. Analysis of the migration of Marsh Harrier across the central Mediterranean.

—, — & — In prep. c. The migration of Hobby across the central Mediterranean.

Dimarca, A., & Iapichino, C. 1984. *La Migrazione dei Falconiformi sullo Stretto di Messina*. LIPU.

Giordano, A. 1991. The migration of birds of prey and storks in the Strait of Messina. *Birds of Prey Bulletin* 4: 239-250.

Hein, C., & Kisling, M. 1991. Der Frühjahrszug von Greifvögeln und Störchen auf der mittleren Zugschiene. Tunesien-Sizilien 1990/1991. DBV.

— & — 1992. Der Frühjahrszug von Greifvögeln und Störchen auf der mittleren Zugschiene. Tunesien-Sizilien 1992. DBV.

Kjellén, N. 1992. Differential timing of autumn migration between sex and age groups of raptors at Falsterbo, Sweden. *Ornis Scand.* 23: 420-434.

Malara, G., & Iapichino, C. 1987. Rapaci e Cicogne sullo Stretto. *LIPU*: 1-16.

Palma, L., & Beja, P. R. 1994. Autumn Migration of Raptors through Sagres (SW Portugal). In: Meyburg, B.-U., & Chancellor, R. D. (eds.), *Raptor Conservation Today*. Mountfield.

Programa Migres. 2000. *La migracion el Estrecho de Gibraltar*. Junta de Andalucia. SEO.

Sagot, E., & Tanguy Le Gac, J. 1984. *Orgambideska Col Libre, Pertuis Pyrénéens. Fasc. 1: rapaces & cicognes 1978-1983*. Editions d'Utovie, Lys.

Shirihai, H., & Christie, D. A. 1992. Raptor migration at Eilat. *Brit. Birds* 85: 141-186.

—, Yosef, R., Alon, D., Kirwan, G., & Spaar, R. 2000. *Raptor Migration in Israel and the Middle East. A summary of 30 years of field research*. IBRC & IOC, Eilat.

Sutherland, W. J., & Brooks, D. J. 1981. Autumn migration of raptors, storks, pelicans and spoonbills at Belen Pass, southern Turkey. *Sandgrouse* 2: 1-21.

Tanguy Le Gac, J. 1981. Orgambideska, col libre des Pyrénées, 1979 et 1980. *Nos Oiseaux* 36: 53-64.

Welch, G., & Welch, I. 1988. The Autumn Migration of Raptors and other Soaring Birds across the Bab-el-Mandeb Straits. *Sandgrouse* 10: 26-50.

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Notes

Northern Gannet 'nesting' on roof-top

On 29th April 2000, I visited the seaside resort of Seaford, East Sussex, having been told that a Northern Gannet *Morus bassanus* had taken up residence on a house roof, and was seen there daily. When I arrived, at 12.30 hours, the gannet was absent, but a small number of Herring Gulls *Larus argentatus* were sleeping on adjacent roofs. At 15.05, I watched an adult gannet fly in off the sea, over the shingle beach, across a road and a playing field, and then straight along a typical suburban road lined with relatively modern houses. Flying in just above the roof-tops, it reached its favourite spot and circled around over an area of gardens below roof height, before swooping up to land on a chimney. It then proceeded to rearrange the small amount of dry seaweed that it had presumably brought on a previous visit as part of a nest-building attempt. Once 'satisfied', it settled down and appeared quite content with its surroundings, showing no concern for the pedestrians, dogs or motor vehicles using the footpath and the road below.

Having photographed the gannet, I spoke to local residents, who told me that the bird had been present for three years, each time displaying and calling early in the year before settling into a routine of sitting on its 'nest'. It was not known to roost there at night, and typically used the site between 10.00 and 16.00 hours. It had remained faithful to the same chimney for two years, but in the first year had used a neighbouring building.



Phil Palmer

101 & 102. Northern Gannet *Morus bassanus*, Seaford, East Sussex, April 2000.

Clearly, the bird was a long way from the nearest gannetry, and in a most unusual environment. As populations increase at traditional colonies, Northern Gannets will spread to adjacent man-made structures such as lighthouses, but the arrival of a single individual in this setting, so far from an established colony, is unusual. I considered the possibility that the bird had been raised in a human environment and therefore associated houses with nesting. At Bass Rock, Lothian, for example, a local boatman regularly rears young Northern Gannets that have jumped too early from the ledges.

Phil Palmer
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EDITORIAL COMMENT This is a quite remarkable occurrence, so far from an established colony. The gannet returned in February 2000, for its fourth year in residence, this time preferring an adjacent roof-top.



Phil Palmer

Northern Lapwing perching on a wall

When I wrote *The Lapwing in Britain* (Spencer 1953), I knew of only two instances of a Northern Lapwing *Vanellus vanellus* perching on a wall. I had come across none since until, on 3rd July 2000, I heard a Northern Lapwing calling rather anxiously on farmland near Burnley, Lancashire, and was surprised to see it standing on top of a typical dry-stone wall, 'supervising' a chick or chicks. When I approached, it rose and gave a typical defensive display, 'dive-bombing' with a rush of wings, but when I backed off it quietly returned to the top of the wall. It was present again, and behaved similarly, on 5th July, on which date I could see one well-grown chick not far away.

The lapwing was a male, as might be expected in the case of an adult accompanying a well-grown late brood (see Spencer 1953). Some other wader species commonly use the top of a wall as a lookout when with chicks, and it is surprising that similar behaviour has so rarely been recorded for Northern Lapwings.

K. G. Spencer
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Roosting behaviour of Common Swifts

Wright *et al.* (2000) reported some interesting observations of Common Swifts *Apus apus*. Very early in the morning, the birds exhibited an unusual behaviour in which they were apparently almost hovering. Although I have never seen such behaviour, I was immediately reminded of some observations recounted to me by the late Prof. Glen Schaefer, but which, so far as I am aware, he never published.

Schaefer made a number of studies of birds by using radar. Some of these involved the use of an S-band fire-control radar which had a very narrow beam with which he could 'lock on' to individual birds in flight. He was trying to see whether he could pick up the wingbeat pattern of the individuals, with the hope of being able to identify them.

It was already well known from the studies of David Lack (1956) that Common Swifts roosted on the wing, and that those which did so ascended several hundred metres at dusk or moved out over the sea, perhaps to avoid colliding with objects while on the wing in the dark.

I asked Schaefer whether he had ever looked at any possible swifts with his radar, and he replied that he had, but that he was puzzled by the observations. The birds which he thought to be swifts did not apparently move in his radar beam; the only movement that he could detect was drifting in the direction of, and with the speed of, the prevailing wind. He calculated that, at the altitude at which the swifts were 'roosting', he would have been able to observe their movements if they were flying normally. The only explanation which he could think of was that the birds were flying in tight circles: if a bird circled within a radius of about 10 m, he would not have been able to detect any movement with his equipment. Both of us thought that this was a little unlikely, and this was possibly one reason why he never published the observations.

There is, however, another study with similar findings. Eastwood (1967), in an account of the vespers flight of swifts, also stated that 'the "angelic hosts" are virtually static, no progress is made in any direction' (other than a seaward drift). Eastwood also quoted Schaefer's study of swifts, saying that Schaefer found a wingbeat frequency of seven per second at night, compared with ten per second during the day. Eastwood's citation, however, is somewhat confusing, since his reference (Schaefer 1966) does not exist in the place cited.

The visual account by Wright *et al.* seems completely in line with Eastwood's and Schaefer's radar observations, though how such a narrow-winged bird as a swift can actually 'hover' remains to be explained. It would clearly be worthwhile for someone with modern equipment to try to find out more about the Common Swift's unusual nocturnal habits. Our most aerial of birds is still keeping some tricks up its sleeve.

References

Eastwood, E. 1967. *Radar Ornithology*. London.
Lack, D. 1956. *Swifts in a Tower*. London.
Schaefer, G. W. 1966. The study of bird echoes using a tracking radar. *Proc. 14th Int. Orn. Congress*.
Wright, M., Brenchley, A., Evans, S., Howe, T., & Underwood, D. 2000. Roosting behaviour of Common Swifts. *Brit. Birds* 93: 144-148.

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Two pairs of Mistle Thrushes nesting in same tree

In 1996, in Fairseat, Kent, a pair of Mistle Thrushes *Turdus viscivorus* nested in a Field Maple *Acer campestre* about 7 m from the front door of my house. The nest was 3 m above ground, and extremely well concealed among the tree's boughs and clinging Ivy *Hedera helix*. On 21st April, two well-grown nestlings were being fed throughout the day by the adults.

On 22nd April, a second pair of Mistle Thrushes started to build a nest in the same tree, 1 m above the first nest and about the same distance diagonally from it; their rather frantic nest-building lasted for about an hour, before the original pair returned to the nest site and drove them off. Once the original pair's young had fledged, however, the new pair must have returned: on 27th April, I noticed an adult on the new nest, while the two fledglings were being fed by their parents farther along the lane.

It was at times virtually impossible to observe the new pair, their chosen site being even more difficult to pinpoint than the original one. Often, the very tip of the adult's tail was the only visible clue to the existence of a nest in the tree. Unfortunately, by 11th May, I could not see any signs of the thrushes' presence, and over the ensuing weeks no new youngsters appeared. The adults had perhaps deserted owing to the persistent visits to the tree by Carrion Crows *Corvus corone* and Magpies *Pica pica*, both of which were nesting nearby.

On checking *BWP* (vol. 5), I could find no information suggesting that two pairs of Mistle Thrushes may attempt to nest in the same tree, although there is mention of the species nesting close to other thrushes.

Chris Bond
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House Sparrow breaking lit light bulbs

In July 1975, I was camping with the Army on the Baltic coast of north Germany. We had set up a mess tent on top of a cliff overlooking the sea, and had strung lights in front of the tent. The lights were 240-volt coloured bulbs with 'prick-through' holders on a mains cable. We noticed that some of the blue bulbs had been broken and, as they were replaced, they were again broken. Only the blue bulbs were damaged in this way. After about four days, the culprit was discovered. A male House Sparrow *Passer domesticus* was seen pecking the hot and lit bulbs until they broke. The sparrow was apparently not harmed by its actions. I have never to this day found an explanation for this behaviour, nor can I offer one.

Major Timothy T. Hallchurch
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EDITORIAL COMMENT The most likely explanation for this interesting behaviour is the natural inquisitiveness of the House Sparrow, but the fact that the individual concerned ignored all but the blue bulbs is intriguing. Denis Summers-Smith (1963, *The House Sparrow*) gave details of an experiment which he carried out in order to determine this species' powers of colour recognition and discrimination. He put out rice dyed with different colours, as well as plain rice, and found that, although the order in which the differently coloured grains were taken varied somewhat from one test to another, the sparrows' general order of preference was blue, green, white, yellow, orange and pink. It is surprising that blue should be selected preferentially, especially since it is supposed to be a colour not favoured by birds (which is why slug pellets are normally blue).

Letters

Saker Falcons in northeast Kazakhstan: a new threat?

Watson & Clarke (*Brit. Birds* 93: 136-143), in discussing the diet of the Saker Falcon *Falco cherrug* in Kazakhstan, identified large-scale habitat changes resulting from the reduction or abandonment of grazing, and the consequent effect on the falcon's prey species, as a potentially important threat to the Saker's population. In the light of these findings, I should like to draw attention to a further potential threat to Saker Falcons in Kazakhstan.

In 1998, during a Glasgow University expedition to survey for Slender-billed Curlews *Numenius tenuirostris*, White-headed Ducks *Oxyura leucocephala* and Sociable Lapwings *Vanellus gregarius*, observations were made in the area between Lake Zysan and the foothills of the Altai Mountains, in northeast Kazakhstan. This area was noted as being exceptionally rich in raptors, in terms of both species and their population sizes. Large numbers of Sakers, predominantly immatures, were seen on most days between 7th and 14th September. These individuals seemed to be feeding largely on Golden Lemmings *Lagurus luteus* (plate 103), a small mammal which is endemic to the Lake Zysan basin (N. Berezovikov, verbally) and is very numerous throughout this dry steppe area.

Running across the region were uninsulated power cables supported on pylons, and raptors of various species, including Saker Falcons, were using these masts as hunting perches. After successfully catching a prey item, the raptor would return to its perch to eat the food, and would then wipe its bill on the exposed cable. The design of the pylons, however, posed a risk. As the crosspiece supporting the cable was made of steel and the pylon itself was constructed of reinforced concrete, the bird's action would cause the power cable to be earthed and the raptor would consequently be electrocuted.



Ross McGregor

103. Golden Lemming *Lagurus luteus*, Lake Zysan, Kazakhstan, September 1998.

The species which we recorded as the most frequent victim was Long-legged Buzzard *Buteo rufinus*, but in casual observation during a ten-day period we recorded at least a dozen dead Saker Falcons. Our observations were all opportunistic, and made from a vehicle driving along roads and tracks; while large stretches of power cable followed the roads, there were greater stretches that were not alongside any road or track and were therefore not checked by us. We collected two freshly killed specimens, a Long-legged Buzzard (plate 104) and a Saker Falcon (plate 105), both of which were skinned and then dissected in the field by veterinary surgeons: each of the two raptors had dead Golden Lemmings in the crop, and large amounts of clotted blood around the heart were symptomatic of the birds having being killed by electrocution.

While this risk faced by the Saker is minor in comparison with threats from habitat change and collection for falconry, it may in time become greater if the falcon's population declines significantly. As the region appears to be very important to immature and post-breeding adult raptors, a large number of birds would be exposed to this danger. These may include the little-known Upland Buzzard *B. hemilasius* (plate 106), which is endemic to the region surrounding the Altai Mountains. I suggest that any birders or ornithologists visiting the area should be aware of this problem and that any observations may prove very valuable. If it is clear that there is a threat to raptor populations in the region, then pressure may be applied to the Kazakhstan government to persuade it to use a different design of pylon in the future.

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Ross McGregor



Ross McGregor

104, 105. Raptors found electrocuted at Lake Zysan, Kazakhstan, September 1998: above, Long-legged Buzzard *Buteo rufinus*; right, Saker Falcon *Falco cherrug*.



Ross McGregor

106. Upland Buzzard *Buteo hemilasius*, Lake Zysan, Kazakhstan, September 1998.

The Glasgow University Kazakhstan '98 Expedition was part-funded by Bayer Animal Health. I should like to thank the other members of the expedition, in particular N. Berezovikov, R. Mellanby, S. Bright and A. Zykin.

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EDITORIAL COMMENT Mark Watson & Roger Clarke have commented: 'Our paper cited examples of similar congregations of Sakers preying on cyclical population "highs" of small mammals in Mongolia and Tibet. Where prey are abundant, and pylons give elevation enabling birds to see down into ground vegetation, the pylons will be a draw for raptors. There may now be a stronger tendency for raptors to adopt this form of still-hunting in areas where the loss of grazing regimes highlighted in our paper has resulted in taller vegetation. High mortality of Sakers and other raptors from electrocution was also recorded by Bagyura *et al.* (1994). We suggest that a pilot study of the phenomenon be instigated urgently, with the aims of better ascertaining the importance of this cause of mortality, what the appropriate insulation device or design modification would be, and, importantly, the practicalities of its implementation in Kazakhstan and other relevant places.'

Reference

Bagyura, J., Haraszthy, L., & Szitta, T. 1994. Methods and results of Saker Falcon *Falco cherrug* management and conservation in Hungary. In: Meyburg, B.-U., & Chancellor, R. D. (eds.), *Raptor Conservation Today*. Mountfield.

Naturalised birds in the city of Valencia

Enrique Murgui's note on the parrots (Psittacidae) and other exotic species now to be found in Valencia, in eastern Spain (*Brit. Birds* 93: 340-341), recalled a similar situation which I encountered on a short visit to Barcelona, northeast Spain, in January 1998. I noticed free-flying green parakeets, in pairs and in very noisy small flocks, all the way from the airport to the centre of the city.

I was in Barcelona for a few days, and saw these birds, always fleetingly as they moved very quickly, several times a day. Some had a greyish throat, suggesting that they were Monk Parakeets *Myiopsitta monachus*; Rose-ringed Parakeets *Psittacula krameri* may have been present as well, as I came across some larger birds, in pairs. I saw one flock of parakeets screaming loudly as they flew past *La Pedrera*, Gaudi's famous block of flats in central Barcelona. Others were seen mostly in parks and in trees, and one pair was perched on the support of a captive bird's cage which hung from a window overlooking a side street.

A deeply unpleasant bird market was sited just outside our hotel, on the Ramblas. It sold mostly small parrots, lovebirds *Agapornis*, parakeets and exotic waxbills (Estrildidae), all contained in tiny cages where most of the larger birds could not spread their wings. At night, the market stalls folded up into tiny, airless booths, birds and all, and one could see the silhouettes of the captives against the headlights of the passing traffic. Only too obviously, some had escaped or, more likely, had been thrown out because they were noisy and too demanding for the purchaser's liking.

Having read Enrique Mergui's note, I rather suspect that a similar situation is to be found in any part of Spain with a suitably mild climate and an active bird market. At some point, these populations of exotic bird species may well link up, resulting in a whole new avifauna becoming prominent in the Iberian peninsula.

Edward Mayer
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EDITORIAL COMMENT This observation is of particular interest with regard to the potential source of the wild-living parakeets. Mr Mayer's suggestion that parakeets may be widespread in Spain is a credible one. According to Snow & Perrins (1998, *BWP Concise* vol. 2), Monk Parakeets are now regular on the Spanish Mediterranean coast, notably in Barcelona (155 nests located in the city area in 1990-91), as well as in Valencia and Torremolinos, while, inland, they have bred in Madrid 'since perhaps 1985' (at least nine nests found in 1992); Rose-ringed Parakeets have bred in Spain since the early 1980s, with a population of 50-100 pairs.

We are most grateful to Jordi Clavell for providing the following statement relating to the situation in the Barcelona region: 'The available information on the exotic avian component of Catalonia is still incomplete and scattered, and it is not possible at present to provide many details. For this reason, we created, in 2000, a working group (Grupo de Aves Exoticas) within SEO-BirdLife, one of the aims of which will be to update the list of exotics, so that this may be used in the early detection of new invaders.

'The better-known infiltrator is the Monk Parakeet (Batllori & Nos 1985; Clavell *et al.* 1991; Sol *et al.* 1997; Sol 2000), the earliest observations of which date from 1975, when two individuals were observed near the Barcelona zoo. Since then, the population has increased exponentially in numbers (Batllori & Nos 1985; pers. observations): in 1991 we counted a total of 155 nests (solitary or in colonies) in Barcelona, and in 1999 the number was 779 and the species had invaded almost the entire city. It may, therefore, be said that the Monk Parakeet is well established in the city.

'The Rose-ringed Parakeet was also detected in the city in the 1970s, but its increase has been much less spectacular: at present it remains localised in several parts of Barcelona, always in small numbers, although evidence of breeding, as well as the species' long period of persistence in the city, leads us to consider that this parakeet, too, is well established.

'There are also two other species that may possibly be established in Barcelona, but for

which insufficient information is yet available: the Mitred Parakeet *Aratinga mitrata* and the Blue-crowned Parakeet *A. acuticaudata*. Both of these Neotropical species can be observed in flocks of about 20-30 individuals in some parts of the city. Other escaped or released Psittacidae (e.g. Nanday Parakeet *Nandayus nenday*) are recorded sporadically.

'The current situation regarding the exotic component of the Spanish avifauna is being studied by the GAE. The results will be published, and will also be made available to researchers via the Internet.'

References

Batllori, X., & Nos, R. 1985. Presencia de la Cotorrita gris *Myiopsitta monachus* y de la Cotorrita de collar *Psittacula krameri* en el área metropolitana de Barcelona. *Miscellània Zoològica* 9: 407-411.

Clavell, J., Martorell, E., Santos, D. M., & Sol, D. 1991. Distribució de la Cotorreta de pit gris *Myiopsitta monachus* a Catalunya. *Butlletí del Grup Català d'Anellament* 8: 15-18.

Sol, D. 2000. Introduced Species: a Significant Component of the Global Environmental Change. PhD Thesis, Dept of Animal Biology (Vertebrates), University of Barcelona.

— , Santos, D. M., Feria, E., & Clavell, J. 1997. Habitat selection by the Monk Parakeet during colonization of a new area in Spain. *Condor* 99(1): 39-46.

Looking back in error

It has been said that no correction can ever catch up with a mistake. It should, however, be noted that the Temminck's Stint *Calidris temminckii* reported to have occurred at Cambridge sewage farm on 17th March 1950 (*Brit. Birds* 44: 31), and mentioned again, 50 years later, in 'Looking back' (*Brit. Birds* 94: 38), in fact occurred in 1949, as set out in the *Cambridge Bird Reports* for 1949 and 1950. Better late than never. Is this a record?

W. R. P. Bourne
Ardgath, Station Road, Dufftown, by Keith AB55 4AX

EDITORIAL COMMENT We are grateful to Dr Bourne for pointing out this error. It is, indeed, remarkable that a mistake in the date of occurrence of a single bird should have been repeated, without comment, half a century after the initial error was made. We should have been more careful.



Tim Loseby

107. Temminck's Stint *Calidris temminckii*, Norfolk, June 1997.

News and comment

Compiled by Bob Scott and Wendy Dickson

Turkish Bird Report

Preparations are now being made for the compilation of the ninth Turkey Bird Report, which will cover the period 1997-2001. For the first time, the report will be the production of a joint Anglo-Turkish team. The report will be published in the OSME journal *Sandgrouse*, as usual, it is hoped in spring 2003. Many records have already been received, and there is no need for these to be sent again. Any observers with unpublished or unsubmitted records, however, are urged to contact any member of the editorial team (preferably either via turkishbirdreport@osme.org or osmegrouse@aol.com).

Records may also be submitted via Turkey Bird Report, OSME, The Lodge, Sandy, Beds SG19 2DL, UK.

It would be helpful if observers were able to consult the most recent report, covering 1992-96 (*Sandgrouse* 22: 13-35), which gives details of those species for which records are particularly sought. Simple trip reports are nonetheless welcome. Anyone requiring further details is welcome to contact Guy Kirwan at the second e-mail address above.

Birds in Counties

David Ballance, who compiled the recent bibliography *Birds in Counties* (reviewed in *Brit. Birds* 93: 460), is working on a first supplement to the book, to contain errata and addenda. He wishes to hear from anyone who has detected any errors, no matter how trivial, or who may provide any addenda. Contributions may be sent to David at Flat 2, Dunboyne, Bratton Lane, Minehead, Somerset TA24 8SQ, tel. 01643 706820.

Kent Ornithological Society fiftieth-anniversary conference

Clearly faring better than the ill-fated second World Birding Conference, the fiftieth-anniversary conference of the KOS, held at Christchurch University College, Canterbury, on 17th March 2001, attracted an excellent turn-out of more than 150 folk. The formal programme consisted of only five speakers, but the quality and entertainment value of these were of the highest order. Jim Flegg opened proceedings with a perceptive and wide-ranging account of changes in the Kent countryside, and its bird populations, during the past 50 years, followed by a cine-film presentation by George Shannon of 'Kentish Birds in the Fifties'. The latter contained some extraordinary footage of the late Bert Axell at work, driving the early Heligoland traps at Dungeness! Next, Ian Wallace provided a typically colourful contribution, which held his audience spellbound until the end of the morning session. In the afternoon, David Parkin lucidly regaled us with the finer points of recent taxonomic studies, including an assessment of those ticks we can all expect from our armchairs in the near future, while Simon Busuttil rounded off matters with a fascinating insight into the RSPB's flagship reserve at Dungeness. In between times, conference-goers were entertained by a splendid display of wildlife art (including the chance to buy Ian Wallace originals for as little as a fiver!), the opportunities to buy yet more bird books for those groaning shelves at home, and the *BB* mystery-photo competition. The latter attracted a good entry and, following a tie for first place, Keith Burch won the prize of a book from the current Pica/Helm catalogue. Conference-organisers Chris Cox and John Cantelo, together with art-exhibition co-ordinator John Hollyer, are to be warmly congratulated.

BOU conference pops up in Cork

The BOU's autumn scientific meeting will be held at University College Cork, Ireland, on 21st-23rd September 2001. The theme is 'Ecological Islands: Patterns and Processes'. The conference, being held jointly with the College, will address the question of island birds from a broad perspective – ecological islands – looking at the different scales from individual plots through to regional, national and landmass. It will be supported by many organisations actively undertaking research and/or conservation work in this field, including BirdWatch Ireland (BI), the British Trust for Ornithology (BTO), the Royal Society for the Protection of Birds (RSPB) and University College Cork (UCC). Prof. Bill Sutherland (University of East Anglia) will give the opening lecture, whilst other speakers include Dr Stephen Baillie (BTO), Sinead Cummins (UCC), Gavin Fennessy (UCC), Dr Sue Fitzpatrick (University of Ulster), Dr Rob Fuller (BTO), Dr David Gibbons (RSPB), Dr Andrew Golser (Edward Grey Institute, Oxford), Dr Rhys Green (RSPB), Dr Shelley Hinsley (NERC), Dr Tom Kelley (UCC), Oscar Merne (Duchas), Dr Steve Newton (BI), Dr John O'Halloran (UCC), Dr Josephine Pithon (UCC) and Dr Rob Robinson (BTO).

This is certainly a conference worth thinking about. In addition to a very impressive programme of speakers, Cork in September can supply some splendid birding, while the exchange rate with the Irish punt is good. Further details are available from the BOU, Natural History Museum, Tring, Hertfordshire HP23 6AP, or the BOU website: www.bou.org.uk

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Genetic investigation of seabirds killed in the Erika disaster

As reported in the most recent edition of the Seabird Group newsletter (no. 87, February 2001), over 60,000 wintering seabirds were oiled and washed up on the west coast of France following the wreck of the *Erika* in the Bay of Biscay in December 1999. The Common Guillemot *Uria aalge* was by far the worst-affected species. Concerned by the environmental impact of this accident, the Laboratoire d'Ecologie in Paris, funded by the French Ministry of the Environment, is setting up a population study on the Common Guillemot.

The programme aims to assess the geographic extent of the impact by using genetic material taken from birds killed in the oil spill, and samples taken from birds nesting in colonies across northern Europe. Using the genetic characters of individual birds, scientists hope to assign the latter to their breeding area of origin. The work will complement the data provided by ringing recoveries, and may provide information about colonies where no ringing has taken place. Provisional results suggest that birds affected by the spill came not only from the Irish Sea area, but also from colonies as far afield as western and northern Scotland. Samples will therefore need to be collected across a large portion of the breeding range of Common Guillemots in the northeast Atlantic.

The researchers involved with the project see this as a unique opportunity to examine the extent of the impact of oil spills of this nature. Such accidents clearly have the potential to affect populations of birds breeding at great distances from the site of the event, which underlines the international nature of the oil-pollution issue.

Amendments to list of County Recorders

We have been notified of five changes of Recorder since the publication of the latest list of County, Regional and Bird Observatory Recorders in Britain and Ireland (*Brit. Birds* 94: 85-87).

Essex There are, in fact, three Recorders for Essex, but Howard Vaughan has now taken on the role of ACRE and BBRC representative, and all general records should be sent to him at the following address: 68 Leigh Road, East Ham, London E6 2AS; howardebs@vaughanh.fsnet.co.uk

Herefordshire Paul Downes has recently handed over to the new Recorder, Steve Coney, Lions Den, Bredwardine, Herefordshire HR3 6DE; coney@blueearrots.com

Isles of Scilly All records for Scilly should be submitted to Kester Wilson, the Recorder for Cornwall (see below).

Lancashire & North Merseyside Maurice Jones has now handed over the reins to Steve White, 102 Minster Court, Crown Street, Liverpool L7 3QD; lwildlife@cix.co.uk

Northamptonshire Bob Bullock has now retired from the role, and the new Recorder is Paul Gosling, 23 Newtown Road, Little Irchester, Northamptonshire NN8 2DX; paul_gosling@lineone.net

There is also one recent change of address to note:

Hertfordshire Mike Ilett's new address is 14 Cowper Crescent, Benged, Hertford, Hertfordshire SG14 3DY; michael.ilett@uk.tesco.com

Finally, entries published for the following counties/regions/bird observatories should be updated as follows:

Cornwall Kester Wilson, 1 Tol-Pedn House, School Hill Road, St Levan, Penzance, Cornwall TR19 6LP; kesteraw@yahoo.com

Dorset Neil Gartshore, 54 Corfe Road, Stoborough, Wareham, Dorset BH20 5AF; neil&yuki@onaga54.freeserve.co.uk

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Isle of May Iain English, 21 Grant Court, Avon Grove, Hamilton, South Lanarkshire M13 7UT; i.english@talk21.com

BSE and the Spanish avifauna

Recent correspondence in *Nature* (vol. 410, p.408) has expressed concern for a range of scavenging bird species in Spain as a result of new legislation designed to halt the spread of BSE. During the past winter, some 30 cases of BSE were detected in Spanish livestock, and since the beginning of 2001 national laws have required that all dead farm animals should be incinerated whatever the cause of death. There is clearly a very close link between livestock-farmers and the internationally important populations of scavenging birds that nest in Spain, and these developments may have serious implications for vultures and other scavengers. In addition to the numbers of wintering Red Kites *Milvus milvus* (about 80% of the European population), Spain holds some 80 breeding pairs of Lammergeiers *Gypaetus barbatus*, 1,300 pairs of Egyptian Vultures *Neophron percnopterus*, 17,500 pairs of Griffon Vultures *Gyps fulvus*, 1,200 pairs of Monk Vultures *Aegypius monachus*, and 130 pairs of Spanish Imperial Eagles *Aquila adalberti*. Further details on vulture conservation in Spain may be found on the website www.seo.org

Reviews

OISEAUX D'ALGÉRIE/BIRDS OF ALGERIA

By Paul Isenmann & Aïssa Moali. Société d'Études Ornithologiques de France, Paris, 2000. 336 pages; 115 colour photographs; 210 maps. ISBN 2-9506548-8-6. Softback, £38.00.



Country avifaunas can be dry and detailed. This one, covering the second largest country in Africa, is certainly not. As a result of the recent political situation, Algeria has been visited much less than neighbouring Morocco, but contains a comparable range of habitats; it is perhaps best known for its recently discovered endemic nuthatch *Sitta ledanti*. This very attractive book will surely do much to promote the riches of this large, diverse country. It is imaginatively designed, lavishly illustrated with superb colour photos, and includes colour distribution maps (fairly crude but useful nevertheless) for every breeding species. Individual accounts covering all the species recorded in Algeria range in length from a few lines to a full page. The information presented is concise, and deals largely with status and distribution. Introductory chapters provide a useful overview of Algerian ornithology. The book is completely bilingual, with French and English text on each page. This is a valuable addition to the North African literature, and is well worth buying for the photos alone - but it contains much more than that.

Nigel Redman

CHECKLIST OF THE FLORA AND FAUNA OF WICKEN FEN

Edited by Laurie E. Friday & Basil Harley. Harley Books, Colchester, 2000. 128 pages. ISBN 0 946589 61 5. Softback, £12.50.

Wicken Fen, in Cambridgeshire, is one of Britain's oldest and best-studied reserves. This staggering checklist makes it easy to see why, with enormous lists of species, from algae to mammals, plus useful site maps and references. For birds, scientific and vernacular names and status are given for 323 species and subspecies (including exotics) from just over 300 ha of fen.

Juliet Vickery

ALSO RECEIVED

Field Guide to the Birds of Britain.

Edited by Michael Davison. Reader's Digest Nature Lover's Library, London, 2001. 320 pages. ISBN 0-276-42504-9. Softback, £9.99.

ICELANDIC BIRD GUIDE

By Jóhann Óli Hilmarsson. Idunn, Reykjavík, 2000. 193 pages; over 500 colour photographs and diagrams. ISBN 9979-1-0379-5. Hardback.

This new, pocket-sized photographic guide is a fine example of how good a photo guide can be. Of course, Iceland does not have too many species to deal with (if vagrants are excluded), but nevertheless this book is a delight to pick up. It is profusely illustrated with over 400 photographs, and most species are given a full page (with up to three photographs, a colour distribution map and a diagram detailing status and seasonal occurrence). The information presented is concise, dealing with identification, behaviour, habitat, distribution and voice. Scarce migrants are given a less detailed treatment, while true vagrants are consigned to the complete checklist at the back. Several general chapters complete the book, including a comprehensive section on nests and eggs, all illustrated with colour photos.

This book is entirely in English (there is an Icelandic version as well) and, remarkably, almost all of the photos were taken by the author. Given that there are not too many identification problems in Iceland, this is probably the only guide you will need for a visit to this neglected outpost of Europe.

Nigel Redman



A SUMMER ATLAS OF THE BREEDING BIRDS OF COUNTY DURHAM

Principal editors Stephen Westerberg & Keith Bowey. Durham Bird Club, 2000. 187 pages; maps, line-drawings. ISBN 1-87401-02-4. Softback, £15.00.

The striking cover of this atlas immediately attracts attention, and the contents do not disappoint. The opening chapters, describing Durham's habitats, climate and geology, are clear, concise and informative. The species accounts discuss conservation status, local range, habitat preferences and threats, and make a brave attempt to estimate the Durham population. The editors have made good use of local knowledge and talent in selecting authors for each species, and the impressive breadth of local expertise ensures that the quality throughout is high. The inclusion of species-coincidence maps provides a very welcome overview of general distribution patterns of Durham's avifauna. This will be a valuable publication for anyone interested in the birds of northeast England and should, as the authors hope, provide a valuable starting point for future survey work.

Jane Reid

Recent BBRC decisions

This regular listing of the most recent decisions by the British Birds Rarities Committee is not intended to be comprehensive or in any way to replace the annual 'Report on rare birds in Great Britain'. The records listed are mostly those of the rarest species, or those of special interest for other reasons. All records refer to 2000 unless stated otherwise.

Accepted: **Swinhoe's Storm-petrel** *Oceanodroma monorhis* Cove, Aberdeen (Northeast Scotland), 5th August. **Little Bittern** *Ixobrychus minutus* Oare Marshes (Kent), 28th June. **Glossy Ibis** *Plegadis falcinellus* Papa Westray (Orkney), 5th-6th January; same, Cruden Bay (Northeast Scotland), 7th January. **Black Duck** *Anas rubripes* Treseo (Scilly), 2nd December to 2001. **Canvasback** *Aythya valisineria* Par Beach Pool (Cornwall), 19th April. **Lesser Scaup** *Aythya affinis* Loch of Harray (Orkney), 20th February to 30th March; Blagdon Lake (Avon), 22nd April to 7th May. **Little Crake** *Porzana parva* Dungeness (Kent), 14th May. **Black-winged Pratincole** *Glareola nordmanni* Grune Point (Cumbria), 17th August to 3rd September. **Pacific Golden Plover** *Pluvialis fulva* Brough Haven (East Yorkshire), 6th-25th July; Grune Point (Cumbria), 5th-9th August; Vaul, Tiree (Argyll), 12th October. **Sociable Lapwing** *Vanellus gregarius* Dingle Marshes and Minsmere (Suffolk), 22nd October. **Red-necked Stint** *Calidris ruficollis* Pool of Virkie (Shetland), 18th-21st July. **Sharp-tailed Sandpiper** *Calidris acuminata* Scatness and Pool of Virkie (Shetland), 27th August to 1st September. **Slender-billed Gull** *Larus genei* Dungeness (Kent), 30th-31st May. **Ross's Gull** *Rhodostethia rosea* Westing, Unst (Shetland), 9th January. **Whiskered Tern** *Chlidonias hybridus* Flamborough Head (East Yorkshire), 4th June. **Alpine Accentor** *Prunella collaris* St Margaret's (Kent), 6th May; Corton (Suffolk), 13th May. **Pied Wheatear** *Oenanthe pleschanka* Toab (Shetland), 17th September; Gibraltar Point (Lincolnshire), 18th-26th November. **Swainson's Thrush** *Catharus ustulatus* St Mary's (Scilly), 12th-19th October. **Zitting Cisticola** *Cisticola juncidis* Portland Bill (Dorset), 15th-16th May. **Olivaceous Warbler** *Hippolais pallida* Collieston (Northeast Scotland), 13th-21st September. **Sardinian Warbler** *Sylvia melanocephala* Roedean (East Sussex), 20th-21st April. **Western Bonelli's Warbler** *Phylloscopus bonelli* St Agnes (Scilly), 30th April to 5th May. **Isabelline Shrike** *Lanius isabellinus* Nene Washes (Cambridgeshire), 8th-9th September; Flamborough Head (East Yorkshire), 8th-10th November. **Lesser Grey Shrike** *Lanius minor* Hillwell (Shetland), 23rd September to 9th October. **Southern Grey Shrike** *Lanius meridionalis pallidirostris* Windwick, South Ronaldsay (Orkney), 22nd September. **Red-eyed Vireo** *Vireo olivaceus* Kenidjack (Cornwall), 28th September to 1st October. **Dark-eyed Junco** *Junco hyemalis* Duncansby (Caithness), 26th-29th April. **Bobolink** *Dolichonyx oryzivorus* Out Skerries (Shetland), 21st-22nd September.

M. J. Rogers, Secretary, BBRC, 2 Churchtown Cottages, Towednack, St Ives, Cornwall TR26 3AZ

The British Birds Rarities Committee is sponsored by Carl Zeiss Ltd.

Monthly Marathon

Plate 49 in volume 94 (repeated here as plate 108) clearly shows a bird of prey, typically perched on a suitable vantage spot from which to scan for prey items.

The general shape, plumage features (such as they are) and sense of size rule out any of the eagles *Aquila/Hieraaetus*. Although the stocky, solid build recalls one of the buzzards *Buteo*, these can also be discounted by what we can see of the plumage and coloration. The upright stance might lead us to think of one of the larger falcons *Falco*, but the apparently short wings (we cannot see any primary projection) should eventually lead us to an *Accipiter* species.



Olaf Lessow

108. Northern Goshawk *Accipiter gentilis*, Germany.

Once we decide that we are dealing with an *Accipiter*, the field is narrowed straight away to four possible species that occur within the Western Palearctic: Northern Goshawk *A. gentilis*, Eurasian Sparrowhawk *A. nisus*, Shikra *A. badius*, and Levant Sparrowhawk *A. brevipes*. Although Northern Goshawks are traditionally thought of as being 'very big', sorting out these four is not always straightforward and in this difficult photograph we do not exactly have much to go on.

When identifying any *Accipiter*, the head is a good place to start, checking for the head pattern and whether there is a dark line down the centre of the throat. Our bird, however, is looking away from us, so we cannot gain much from this part of its anatomy and perhaps, therefore, we should go straight to what is really the most striking feature – the tail. Of this we should note three things. First, it is relatively short; second, it has obviously rounded corners; and, third, it shows three broad dark bands. All of the contenders have a barred tail and, indeed, the number of tail bars and the strength of the barring are useful identification features for many of the *Accipiter* species that occur not only within our region, but also right across Asia. Eurasian Sparrowhawk typically shows three or four rather thin, well-spaced bands, while on both Shikra and Levant Sparrowhawk we would expect five or six more densely packed bars. All three of these species would also show a proportionally longer and, crucially, a more square-ended tail. This leaves Northern Goshawk; and the bird in the photograph does indeed show the three broad bands that we would anticipate on this species, together with clearly rounded tail-corners plus the feeling of a chunky, well-built species.

This Northern Goshawk was photographed in Germany, by Olaf Lessow. Although not the sharpest of pictures, the faint buffish wash on the underparts and the equally faint spots or streaks do suggest that we are dealing with a young bird. On an



109. 'Monthly Marathon'. Photo no. 177. Twenty-fifth stage in eleventh 'Marathon'. Identify the species. Read the rules (see page 55), then send in your answer *on a postcard* to Monthly Marathon, c/o The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY, *or by e-mail* to editor@britishbirds.co.uk, *to arrive by 5th June 2001*.

adult, even fine barring would give the impression of a greyish wash on the underside. Perhaps we can also see enough of the side of the head to decide that there is not much evidence of pattern – no hint of a supercilium or darker ear-coverts – again suggesting the plainer plumage of a young bird.

Those at the top of the Monthly Marathon leader board dealt with this potential banana skin very comfortably, and there is now clear daylight between the six leading contestants and the chasing pack. The sequence remains unchanged from last month, with Christer Kalenius on a run of 11 consecutive correct answers, Peter Lansdown, Andy Mears, Jakob Sunesen and Peter Sunesen all on ten-in-a-row (and doubtless hoping for a slip-up by their Finnish rival), and Jon Holt still in the hunt with nine-in-a-row. 62% of entrants identified this raptor correctly, with a surprising 15% opting for Lesser Kestrel *Falco naumanni* as the second most popular answer, and 12% voting for Shikra.

As regular readers will be aware, a minimum sequence of 13-in-a-row, and a clear leader, are required in order to secure the prize in the present competition. We apologise to some overseas readers who may have had only a few days to research the possibilities in recent rounds of the competition. Entries are now acceptable by e-mail, sent to editor@britishbirds.co.uk

Steve Rooke

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Recent reports

Compiled by Barry Nightingale and Anthony McGeehan

This summary of unchecked reports covers the period mid March to mid April 2001. **Night Heron** *Nycticorax nycticorax* Land's End (Cornwall), 23rd March; Tresco (Scilly), 4th April. **Great White Egret** *Egretta alba* One over Friston Forest (West Sussex), 25th March. **Purple Heron** *Ardea purpurea* Skomer (Dyfed), 22nd March. **Brent Goose** *Branta bernicla* of grey-bellied form '*orientalis*' Adult at various locations between Dundrum, Tyrella and Killough (Co. Down), 1st-8th April. **Red-breasted Goose** *B. ruficollis* Montrose Basin (Angus), 29th March to 8th April. **American Wigeon** *Anas americana* Male, Rogerstown (Co. Dublin), until at least 8th April. **Black Duck** *A. rubripes* Slapton (Devon), until at least 28th March. **Ring-necked Duck** *Aythya collaris* Male, Oxford Island (Co. Armagh), 7th-9th April. **Lesser Scaup** *A. affinis* Female, near Oxford Island, 28th March. **Kentish Plover** *Charadrius alexandrinus* Dawlish Warren (Devon), 22nd March, with two different individuals, 26th-27th March; Ferrybridge (Dorset), 3rd April. **Long-billed Dowitcher** *Limnodromus scolopaceus* Adult still at Belfast Lough RSPB Reserve (Co. Down), until at least 6th April. **Great Spotted Cuckoo** *Clamator glandarius* Land's End, 25th March. **Alpine Swift** *Tachymarptis melba* Found dead, Eastbourne (East Sussex), 26th March; two at Portland (Dorset),



Mike Ashforth

110. White Stork *Ciconia ciconia*, Hull, East Yorkshire, April 2001.



Gary Bellingham

111. Black Duck *Anas rubripes*, Slapton, Devon, March 2001.

3rd April. **Red-rumped Swallow** *Hirundo daurica* Slimbridge (Gloucestershire), 5th April. **Bohemian Waxwing** *Bombycilla garrulus* 450, Henry's Place, Belfast, 1st-4th April, the largest flock ever recorded in Ireland. **Bluethroat** *Luscinia svecica* of white-spotted race *cyanecula* At least 13 from mid March to early April: Deal (Kent), 18th March; Landguard (Suffolk), 17th-18th March; Shoeburyness (Essex), 19th-27th March; Lowestoft (Suffolk), 24th March; Portland, 26th March; Swalecliffe (Kent), 27th March; Cley (Norfolk), 28th March; Inner Farne (Northumberland), 28th March; Whalsay (Shetland), 29th-30th March; Fair Isle (Shetland), two on 30th March and 4th April; Cove (Aberdeenshire), 2nd April; Out Skerries (Shetland), 5th April. **Northern Wheatear** *Oenanthe oenanthe* 1,000+ Portland, 17th-18th March, part of a large fall of migrants along the south coast of England. **Subalpine Warbler** *Sylvia cantillans* Skokholm (Pembrokeshire), 2nd-8th April. **Short-toed Treecreeper** *Certhia brachydactyla* Dungeness (Kent), 27th-30th March. **Penduline Tit** *Remiz pendulinus* Weybourne, then Salthouse (Norfolk), 1st April. **Red-billed Chough** *Pyrrhocorax pyrrhocorax* Portland, 21st-22nd March and 8th April; Porthgwarra (Cornwall), 24th-27th March; Slapton Ley (Devon), 1st April; Land's End, 3rd April. **European Serin** *Serinus serinus* At least five: Shoeburyness, 20th-31st March; Littlehampton (West Sussex), 24th March; Portland, 25th March and 2nd April, with two on 3rd April and one on 4th April; Dungeness, 30th March and 2nd April. **Long-tailed Rosefinch** *Uragus sibiricus* One (of unknown origin) South Beckton Park (Greater London), 24th March. **Rustic Bunting** *Emberiza rustica* Filey (North Yorkshire), 26th-31st March.



Mike Malpass

112. Short-toed Treecreeper *Certhia brachydactyla*, Dungeness, Kent, March 2001.



Dave Nye

113. Bluethroat *Luscinia svecica* of white-spotted race *cyanecula*, Cley, Norfolk, March 2001.



Mike Malpass

114. European Serin *Serinus serinus*, Shoeburyness, Essex, March 2001.

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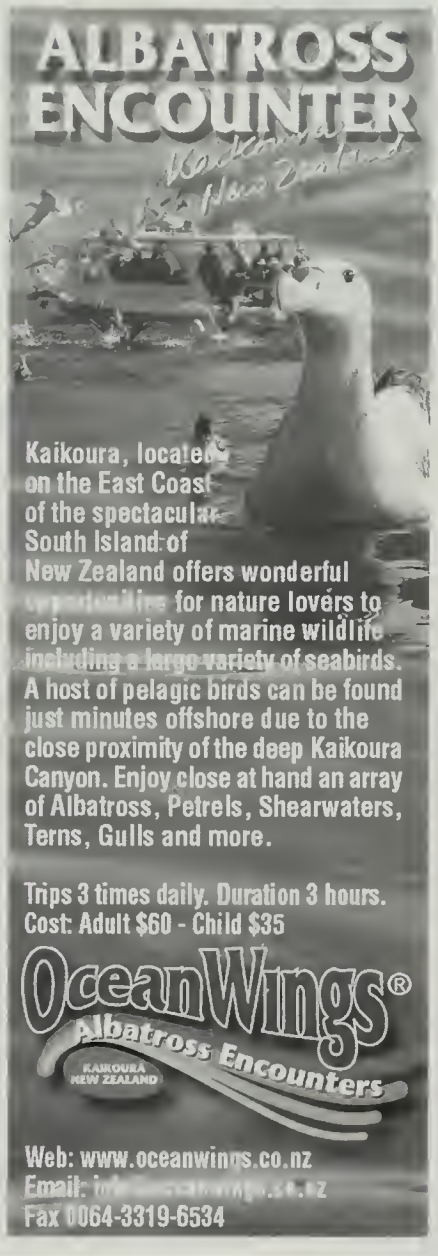
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Book of the Month

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Snow (ed.) *The Birds of the Western Palearctic* 2-volume concise edition (OUP)	now	£49.50	❑

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Ranft & Konig *Owls Double CD* (Pica Press) DUE MAY		Double CD	£24.99 ❑
Ridgely & Greenfield *The Birds of Ecuador* 2-volume set (Cornell) DUE JUNE		Hardback	£80.00 ❑
Short, Lester, Horne & Gilbert *Toucans, Barbets & Honeyguides* (OUP) DUE JUNE		Hardback	£40.00 ❑

Recommended Books

Europe & Western Palearctic

Adamian & Klem *A Field Guide to the Birds of Armenia* (AUA)	Field cover	£35.99	❑
	Hardback	£39.99	❑
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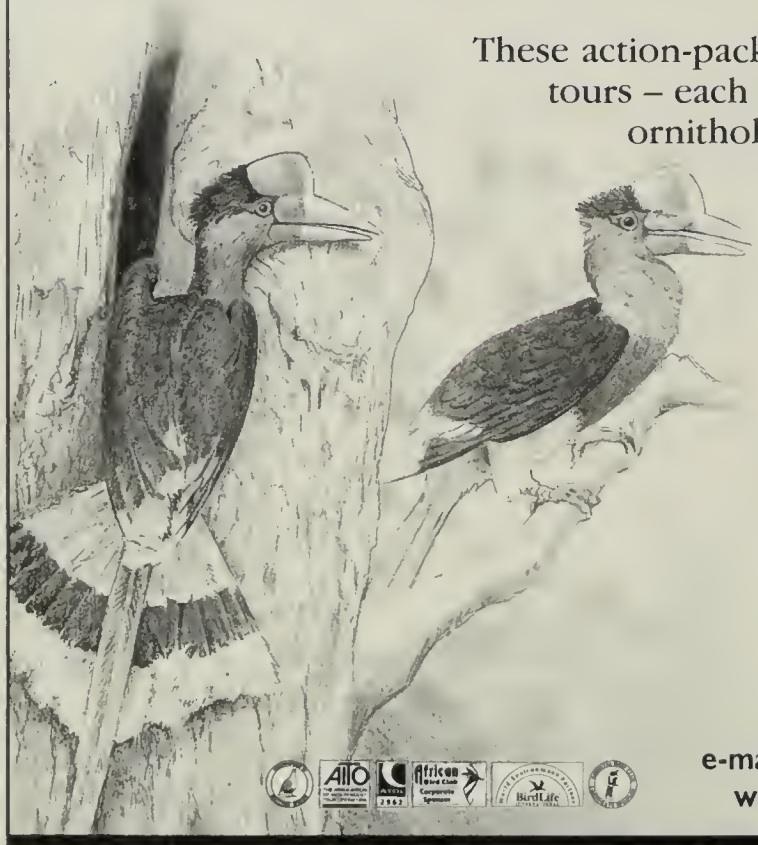
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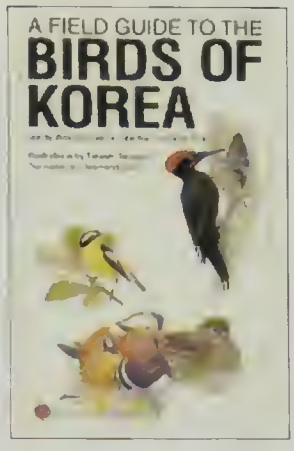
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The taxonomic status of Green-winged Teal *Anas carolinensis*

George Sangster, Martin Collinson, Andreas J. Helbig, Alan G. Knox, David T. Parkin and Tony Prater[1]



Dan Powell

ABSTRACT During the second half of the twentieth century, Green-winged Teal *Anas carolinensis* was almost universally treated as a subspecies of 'Common Teal'. Reassessment of morphological and behavioural differences between Green-winged Teal and Eurasian Teal *A. crecca*, together with molecular evidence regarding the phylogenetic relationships of Green-winged Teal, Eurasian Teal and Speckled Teal *A. flavirostris*, indicates that these taxa are best treated as separate species. The status of Green-winged Teal as a species can be justified under the Phylogenetic, Evolutionary and Biological Species Concepts. The basis for recognising *A. c. nimia* as a separate taxon is weak, but merits further study.

The Holarctic 'Common Teal' was until recently treated as a polytypic species, comprising three subspecies, *A. c. crecca* (Eurasian Teal, hereafter *crecca*) in the Palearctic, *A. c. nimia* (hereafter *nimia*) on the Aleutian Islands, and *A. c. carolinensis* (Green-winged Teal, hereafter *carolinensis*) elsewhere in the Nearctic. The treatment of

1. *On behalf of the Association of European Rarities Committees and the British Ornithologists' Union Records Committee*

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crecca and *carolinensis* as conspecific dates back to the early part of the twentieth century, when the concept of polytypic species became predominant in ornithology (Hartert 1912-21; Witherby 1924; Peters 1931; Witherby *et al.* 1939). Most subsequent taxonomic publications (Delacour & Mayr 1945; Delacour 1956; AOU 1973; Johnsgard 1978, 1979; Madge & Burn 1988; del Hoyo *et al.* 1992; Johnson 1995) followed this treatment.

During the nineteenth century, *crecca* and *carolinensis* were treated as separate species (e.g. Gray 1871; Baird *et al.* 1884; Salvadori 1895). A number of recent authors have also adopted this stance (Stepanyan 1990; Livezey 1991, 1997; Gantlett *et al.* 1996; Johnson & Sorenson 1999; Sangster *et al.* 1999), although most of these have provided only brief statements on their reasons for doing so.

The Association of European Rarities Committees (AERC) and the British Ornithologists' Union Records Committee (BOURC) have decided, on the recommendations of their taxonomic advisory committees, to treat *crecca* and *carolinensis* as separate species. In this paper, which is written on behalf of the AERC and BOURC, we summarise the morphological, behavioural and molecular evidence for differentiation of *crecca* and *carolinensis*, and discuss the taxonomic status of *carolinensis* according to the Phylogenetic (PSC), Evolutionary (ESC) and Biological Species Concepts (BSC).

Differentiation

Male plumage

Males of *crecca* and *carolinensis* are separable by a combination of plumage differences. These characters are well known and have been adequately described in the literature (Delacour 1956; Palmer 1976; Johnsgard 1978; Madge & Burn 1988; Millington 1998).

- *carolinensis* has a vertical white bar, or crescent, at the front of the flanks (absent from *crecca*)
- *crecca* has the inner webs of the long (outer) scapulars white, collectively forming a longitudinal white stripe above the flanks at rest; *carolinensis* lacks white on the scapulars
- *crecca* generally has conspicuous cream or pale buff lines separating the green from the rufous/chestnut parts of the head; in *carolinensis* these pale lines on the sides of the head are reduced or lacking
- *carolinensis* has fine (occasionally coarse) black vermiculations on the back and sides; in *crecca*, the mantle, scapulars and flanks are generally coarsely vermiculated black
- *carolinensis* has a deeper, more richly coloured wash on the breast than *crecca*



Arthur Morris/Windrush

115. Male Green-winged Teal *Anas carolinensis*, Jamaica Bay, New York, USA. The prominent vertical white bar at the front of the flanks, the absence of a white line above the flanks, and the inconspicuous pale lines on the sides of the head are the most obvious plumage characters separating male Green-winged from male Eurasian Teal *A. crecca*.



Tim Loseby

116. Male Eurasian Teal *Anas crecca*, Norfolk, April 1990.

Female plumage

Although females are 'almost identical' (Parkes 1958), it has long been known that the pale greater-covert bar, at the leading edge of the wing speculum, is richer in colour (brownish-buff or cinnamon-buff) in *carolinensis* than in *crecca* (Phillips 1923; Schioler 1925). Phillips (1923) stated that 90% of specimens can be identified to taxon by this character.

According to Millington (1998), the head pattern also appears different: 'Although there is much individual variation, the head pattern shown by [*crecca*] is largely indis-



Arthur Morris/Windrush

117. Female Green-winged Teals *Anas carolinensis*, Jamaica Bay, New York, USA. The individual on the right shows a relatively well-defined head pattern and finely mottled breast. The inner half of the greater-covert wingbar is a rich cinnamon-buff colour. The latter feature can also be seen on the folded wing of the individual to the left.



David Tipling/Windrush

118. Female Eurasian Teal *Anas crecca*. The head pattern of this individual is perhaps stronger than on many Eurasian (and therefore more similar to Green-winged Teal *A. carolinensis*), but the breast mottling is slightly bolder than on the Green-winged in plate 117.



Jonathan Leach/WWT

119. Female Eurasian Teal *Anas crecca*, UK. Part of the greater-covert wingbar is washed cinnamon on this individual, demonstrating that there is some variability in this character. Compare with the Green-winged Teals *A. carolinensis* in plate 117.

tinct and lacks any great contrast. On [*carolinensis*], however, the head pattern can be really quite distinct, even vaguely recalling that of Garganey *A. querquedula*. The crown and eye-stripe may be dark brown, highlighting a pale supercilium, while a dark smudge on the ear-coverts may highlight an almost equally pale upper cheek stripe. At the same time, the loral area may be very pale and clear of dark freckling, while the throat is often white.'

Other potential differences that have been proposed are: the colour of the bill (*carolinensis* appears to show far less pale coloration on the bill; Millington 1998); the 'tightness' of the mottling on the breast sides and fore-flanks (smaller, more compact patterning in *carolinensis*; Scott 1999); and the depth of the white tips of the outer secondaries (usually broader in *carolinensis*; Scott 1999). Given the fact that sample sizes are not specified, the taxonomic value of these purported differences remains unclear.

Molecular differentiation and phylogenetic relationships

A study based on mitochondrial DNA (mtDNA) restriction fragments documented three distinct DNA sequences (haplotypes) in *crecca* from northeastern Russia and *carolinensis* from the state of Washington, USA (Zink *et al.* 1995). Two haplotypes were very divergent (3.6% sequence divergence). One of these haplotypes, however, was found both in northeastern Russia (n=1) and in the USA (n=1), suggesting either gene exchange between the continents or that this haplotype predates the divergence of *crecca* and *carolinensis*.

A phylogeny based on morphological characters grouped *crecca* and *carolinensis* as sister taxa, with Baikal Teal *A. formosa* being their closest relative (Livezey 1991). Behavioural and molecular comparisons (Johnsgard 1965; Johnson & Sorenson 1999), however, suggest that *crecca* and *carolinensis* are more closely related to the sexually monomorphic Speckled Teal *A. flavirostris* of South America. The molecular phylogeny of Johnson & Sorenson (1999) even suggests that *carolinensis* is more closely related to *A. flavirostris* (with 100% bootstrap statistical support) than to *crecca*. These authors also found that *crecca* and

carolinensis are genetically divergent, on the basis of cytochrome *b* and ND2 mtDNA sequences.

The paraphyletic relationship of *crecca* and *carolinensis*, which suggests that the common ancestor of *crecca* and *carolinensis* also gave rise to *flavirostris*, is unexpected. Thirty additional steps are required in the unweighted molecular data, however, to make these two species sister taxa (Johnson & Sorenson 1999). Statistical support for the inclusion of *crecca* in the *carolinensis/flavirostris* clade is less than 50% and, in a previous analysis of these data, *crecca* and *carolinensis* even turned up in different parts of the tree (Johnson & Sorenson 1998). The sister relationship between *A. flavirostris* and *carolinensis* is strongly supported, and indicates that the former evolved from birds colonising South America from the north (Johnson & Sorenson 1999).

Courtship behaviour

A detailed study by Laurie-Ahlberg & McKinney (1979) of the 'nod-swim' display of captive male teals has documented several quantitative differences in courtship behaviour between *crecca* and *carolinensis*.

The study found clear differences in the association between the 'nod-swim' and 'grunt-whistle' behaviours. In large courtship groups, about 30% of male *carolinensis* included nod-swim in their grunt-whistle displays, compared with only 3% for *crecca* males. The difference is highly significant statistically ($p<0.01$). There are also differences in the frequency of the nod-swim display. Six *carolinensis* males performed nod-swim an average of 28.60 times (standard error 12.95) in 400 seconds. The mean value for 12 *crecca* males was 12.27 times (standard error 7.13) in the same time period. This difference is also highly significant ($p<0.01$), and is largely due to the absence of nod-swim from the grunt-whistle behaviour of *crecca*. Removing composite behaviours from *carolinensis* still left 20.60 nod-swims (standard error 13.60) per 400 seconds, although this does not differ significantly from the rate for *crecca*. The independent nod-swim behaviour is usually given in response to the approach of another male. The difference between the two taxa implies a difference in the threshold of the nod-swim behaviour, and this indeed seems to be the case. For *carolinensis*, 40% of approaches elicited a nod-swim response, significantly more than the 16% observed in *crecca* ($p<0.01$).

Laurie-Ahlberg & McKinney (1979) summarised their results as follows: 'Despite the fact that nod-swimming appears to serve the same display functions in both races, striking quantitative differences are reported here: (1) The marked temporal association of nod-swimming with the grunt-whistle sequence in *carolinensis* is absent or greatly reduced in *crecca*. (2) Both the total nod-swim frequency and the frequency of independent nod-swimming are greater in *carolinensis* than in *crecca*. (3) The proportion of approaches followed by nod-swimming is greater in *carolinensis* than in *crecca*.'

Discussion

The case for lumping

Parkes (1955, 1958) discussed the taxonomic status of *carolinensis* in the context of the BSC. He argued that *crecca* and *carolinensis* should be treated at the level of subspecies because they are geographically discrete, the females are almost identical, and there are no behavioural differences between the two taxa. He also pointed out that, even though the occurrence of hybridisation is so common among ducks that it cannot be used as the sole basis for conspecificity, it is nevertheless interesting to note that some apparent hybrids between the two have been reported. Others who accepted *carolinensis* as a subspecies of *A. crecca* provided only brief justification for this view (Mayr & Short 1970; Beaman 1994).

The case for lumping seems to rest on (1) allopatry of breeding ranges, (2) similarity of females, (3) a lack of behavioural differences, and (4) the existence of intermediate, perhaps hybrid, individuals. None of these arguments is persuasive. First, geographical separation (allopatry) is not in itself sufficient evidence of conspecificity. What needs to be demonstrated is a lack of reproductive isolation (BSC), or a lack of diagnostic character states (PSC, ESC). Second, none of the current species concepts requires that *both* sexes should differ in external characters if a taxon is to be recognised as a species. Third, the supposed lack of behavioural differences is based on brief, anecdotal characterisations

of courtship behaviour (Cruickshank 1936) and is not supported by Laurie-Ahlberg & McKinney (1979), who instead found significant quantitative (though not qualitative) differences in three behavioural parameters. Finally, interspecific hybridisation by ducks is a common and widespread phenomenon. There is no reason to presume that reports of hybridisation are taxonomically more significant for teals than for other groups of ducks that are generally treated as species (e.g. Mallard *A. platyrhynchos*, [American] Black Duck *A. rubripes*, Pacific Black Duck *A. superciliosa*). Moreover, although males showing a combination of characters of *crecca* and *carolinensis* are known from Europe (Vinicombe 1994; Fraser *et al.* 1996), and from the USA in New England (Cruickshank 1936; Poole 1940; Palmer 1976) and the Pribilof Islands, Alaska (Mayr & Short 1970; Palmer 1999), these are not evidence of a lack of reproductive isolation. In Europe and New England, only one taxon normally occurs. In the Pribilof Islands, *carolinensis* is a (regular) vagrant, whereas *crecca* is an uncommon visitor (Palmer 1999). The degree of assortative mating cannot be assessed from these reports of intermediates, because in each of the areas vagrants generally do not have members of their own taxon available for mating. In conclusion, the case for lumping under the BSC is weak.



Arthur Morris/Windrush

120. Eclipse male Green-winged Teal *Anas carolinensis*, Jamaica Bay, New York, USA. As on the female in plate 117, the inner part of the greater-covert wingbar of this eclipse male is deep cinnamon-buff in colour.

The case for splitting

The diagnostic plumage differences of male *crecca* and *carolinensis* are evidence of a separate evolutionary history, so that *crecca* and *carolinensis* can therefore be recognised as phylogenetic species (Cracraft 1983). The strong mtDNA support for a sister relationship between *carolinensis* and *A. flavirostris* with a more basal position for *crecca* is incompatible with the traditional view that *crecca* and *carolinensis* are conspecific and that *A. flavirostris* is a separate species. For a full understanding of the evolutionary history and biogeography of the complex, however, more information about mtDNA variation within the complex is desirable.

Under the ESC, *crecca* and *carolinensis* can be recognised as species because the differences in the plumage of male *crecca* and *carolinensis*, and the evidence for paraphyly, suggest that these taxa represent separate population lineages, with their own 'evolutionary tendencies and historical fates' (Simpson 1961; Wiley 1978). Proponents of the ESC (Frost & Kluge 1994; Christofferson 1995; Mayden 1997) have suggested that it represents a theoretical (or primary) species concept and that the PSC is an operational (or secondary) species concept. These authors view the ESC and the PSC as complementary aspects of a single approach in which the PSC provides an operational criterion for the ESC. According to this interpreta-



David Tipling/Windrush

121. Male Eurasian Teal *Anas crecca*, Minsmere, Suffolk.

tion, the evidence presented here in support of species status under the PSC also supports the treatment of *crecca* and *carolinensis* as evolutionary species.

Assessment of the taxonomic rank of *crecca* and *carolinensis* with the BSC is somewhat problematic because the breeding ranges of these taxa are allopatric. As mentioned earlier, reports of males showing a combination of the characters of *crecca* and *carolinensis* do not necessarily indicate a lack of reproductive isolation. As Mayr (1940) pointed out, the existence of a few hybrids does not immediately rule out species status under the BSC. Although *crecca* and *carolinensis* are not completely diagnosable by courtship behaviour, it is possible that the differences described in three aspects of courtship behaviour form a barrier to gene flow in the wild. In any case, the molecular evidence for a non-sister relationship of *crecca* and *carolinensis* strongly suggests that these taxa are best treated as separate species. Monophyly of polytypic species is not explicitly required by the BSC, but few systematists would intentionally recognise a taxon as a species when there is strong evidence that it represents a paraphyletic group of taxa.

In conclusion, *crecca* and *carolinensis* can be recognised as species under each of the three most popular species concepts. These taxa are therefore best treated as separate species: Eurasian Teal *A. crecca* and Green-winged Teal *A. carolinensis*.

The status of Anas crecca nimia

Friedmann (1948) described the populations on the Aleutian Islands as a separate subspecies *A. c. nimia*. Most subsequent authors have accepted this (Delacour 1956; Johnsgard 1978, 1979; Madge & Burn 1988; del Hoyo *et al.* 1992; Johnson 1995), although Delacour (1956) noted that it is a 'very slightly characterised sub-species [that] is hardly recognisable', while Gibson & Kessel (1997) treated *nimia* as a synonym of *crecca*.

Friedmann (1948) based his description of *nimia* solely on differences in average size from *crecca*. Friedmann's data are presented in table 1. In most measurements, *nimia* is larger on average than *crecca*. Except for wing length of females, however, *nimia* and *crecca* show overlapping ranges in all five biometric measurements.

Since the variances of Friedmann's measurements are not known, it is not clear whether the differences in average size between *nimia* and *crecca* are statistically significant. The lack of overlap in female wing lengths may have been caused by the small sample of *nimia*, of which only three females were examined. Delacour (1956) remarked that the various populations of *crecca* have a tendency to increase in size from west to east, in a continuous cline. Friedmann's measurements of *crecca* are consistent with this view. It is therefore possible that the populations on the Aleutian Islands are simply the end-point of this cline.

Table 1. Measurements (range, average) of *A. c. crecca* and *A. c. nimia* (taken from Friedmann 1948). All measurements in millimetres.

	Male	Female
Wing length		
nimia (13 males; 3 females)	182-204 (193.1)	185-189 (186.7)
crecca Kamchatka, Bering I (3 males); eastern Siberia (4 females)	177-182 (179.3)	166-173 (172.0)
crecca China, Japan, Korea (22 males); Japan, China, Burma, Thailand (17 females)	174-187 (179.5)	167-182 (174.1)
crecca Europe (3 males; 5 females)	175-182 (178.0)	167-184 (176.4)
Tail length		
nimia (13 males; 3 females)	65.1-76.0 (71.0)	65.6-66.6 (66.1)
crecca Kamchatka, Bering I (3 males); eastern Siberia (4 females)	62.1-66.5 (63.7)	60.0-61.1 (60.6)
crecca China, Japan, Korea (22 males); Japan, China, Burma, Thailand (17 females)	62.1-70.9 (65.3)	60.2-65.1 (62.6)
crecca Europe (3 males; 5 females)	61.4-64.7 (63.0)	58.3-66.0 (61.9)
Exposed culmen		
nimia (13 males; 3 females)	33.2-37.4 (35.8)	34.2-36.1 (35.1)
crecca Kamchatka, Bering I (3 males); eastern Siberia (4 females)	35.1-38.1 (36.8)	31.1-37.1 (34.2)
crecca China, Japan, Korea (22 males); Japan, China, Burma, Thailand (17 females)	29.3-38.1 (35.6)	33.0-35.4 (34.0)
crecca Europe (3 males; 5 females)	36.2-37.9 (37.1)	33.7-36.5 (35.5)
Tarsus length		
nimia (13 males; 3 females)	29.2-34.1 (31.4)	30.4-31.2 (30.9)
crecca Kamchatka, Bering I (3 males); eastern Siberia (4 females)	28.5-30.2 (29.6)	28.1-32.1 (29.4)
crecca China, Japan, Korea (22 male); Japan, China, Burma, Thailand (17 females)	28.1-31.1 (29.9)	27.2-30.1 (28.6)
crecca Europe (3 males; 5 females)	30.1-35.4 (31.9)	28.1-31.1 (29.3)
Middle-toe length without claw		
nimia (13 males; 3 females)	33.1-39.1 (35.7)	33.1-34.1 (33.8)
crecca Kamchatka, Bering I (3 males); eastern Siberia (4 females)	32.2-33.2 (32.8)	30.2-34.1 (32.8)
crecca China, Japan, Korea (22 males); Japan, China, Burma, Thailand (17 females)	31.1-36.4 (33.0)	28.1-34.1 (31.9)
crecca Europe (3 males; 5 females)	32.2-34.2 (33.2)	30.2-34.6 (32.3)

Variation in biometric characters is plastic and is subject to environmental induction (James 1983; Boag 1987). The influence of food during the nestling stage on the ensuing adult phenotype has been demonstrated for other Anatidae (Larsson & Forslund 1991; Larsson 1993; Leafloor *et al.* 1998). Consequently, the slightly larger average size of *nimia* compared with *crecca* may be caused by environmental influences.

Since Friedmann's (1948) original paper, very little new information on *nimia* has become available and its taxonomic status has not been re-examined. Palmer (1976) presented additional measurements, but these also lacked a measure of variance. In a comparison of 550 base pairs of the ND2 gene, *nimia* was identical to *crecca* (Johnson & Sorenson 1999). Using these data, the basis for recognising *nimia* as a separate taxon is clearly weak and merits further study.

References

American Ornithologists' Union (AOU) 1973. Thirty-second supplement to the American Ornithologists' Union *Check-list of North American Birds*. *Auk* 90: 411-419.

Baird, S. F., Brewer, T. M., & Ridgway, R. 1884. *The Water Birds of North America*. Boston.

Beaman, M. 1994. *Palearctic Birds*. Stonyhurst.

Boag, P. T. 1987. Effects of nestling diet on growth and adult size of Zebra Finches (*Poephila guttata*). *Auk* 104: 155-166.

Christofferson, M. L. 1995. Cladistic taxonomy, phylogenetic systematics, and evolutionary ranking. *Syst. Biol.* 44: 440-454.

Craeraft, J. 1983. Species concepts and speciation analysis. *Curr. Ornithol.* 3: 159-187.

Cruickshank, A. D. 1936. Some observations of the European Teal. *Auk* 53: 321-322.

Delacour, J. 1956. *The Waterfowl of the World*. vol. 2. London.

— & Mayr, E. 1945. The family Anatidae. *Wilson Bull.* 57: 3-55.

Fraser, P. A., Lansdown, P. G., & Rogers, M. J. 1999. Report on scarce migrant birds in Britain in 1996. *Brit. Birds* 92: 3-35.

Friedmann, H. 1948. The Green-winged Teals of the Aleutian Islands. *Proc. Biol. Soc. Wash.* 61: 157-158.

Frost, D., & Kluge, A. G. 1994. A consideration of epistemology in systematic biology, with special

reference to species. *Cladistics* 10: 259-294.
Gantlett, S., Harrap, S., & Millington, R. 1996. Taxonomic progress. *Birding World* 9: 251-252.
Gibson, D. D. & Kessel, B., 1997. Inventory of the species and subspecies of Alaska birds. *Western Birds* 28: 45-95.
Gray, G. R. 1871. *Hand-list of Genera and Species of Birds, distinguishing those contained in the British Museum*. part 3. London.
Hartert, E. 1912-21. *Die Vögel der Paläarktischen Fauna*. band II. Berlin.
James, F. C. 1983. Environmental component of morphological differentiation in birds. *Science* 221: 184-187.
Johnsgard, P. A. 1965. *Handbook of Waterfowl Behavior*. Ithaca.
— 1978. *Ducks, Geese and Swans of the World*. Lincoln.
— 1979. Order Anseriformes. In: Mayr, E., & Cottrell, G. W. (eds.), *Check-list of Birds of the World*. vol. 1 (second edn): 425-506. Cambridge.
Johnson, K. P. 1995. Green-winged Teal (*Anas crecca*). In: Poole, A., & Gill, F. (eds.), *The Birds of North America*, No. 193: 1-20. Philadelphia and Washington.
— & Sorenson, M. D. 1998. Comparing molecular evolution in two mitochondrial protein coding genes (cytochrome *b* and ND 2) in the dabbling ducks (Tribe:Anatini). *Mol. Phylogen. Evol.* 10: 82-94.
— & — 1999. Phylogeny and biogeography of dabbling ducks (genus *Anas*): a comparison of molecular and morphological evidence. *Auk* 116: 792-805.
Larsson, K. 1993. Inheritance of body size in the Barnacle Goose under different environmental conditions. *J. Evol. Biol.* 6: 195-208.
— & Forslund, P. 1991. Environmentally induced morphological variation in the Barnacle Goose, *Branta leucopsis*. *J. Evol. Biol.* 4: 619-636.
Laurie-Ahlberg, C. C., & McKinney, F. 1979. The nod-swim display of male Green-winged Teal (*Anas crecca*). *Anim. Behav.* 27: 165-172.
Leafloor, J. O., Ankney, C. D., & Rusch, D. H. 1998. Environmental effects on body size of Canada Geese. *Auk* 115: 26-33.
Livezey, B. C. 1991. A phylogenetic analysis and classification of recent dabbling ducks (Tribe Anatini) based on comparative morphology. *Auk* 108: 471-507.
— 1997. A phylogenetic classification of waterfowl (Aves: Anseriformes), including selected fossil species. *Ann. Carnegie Mus.* 66: 457-496.
Madge, S. C., & Burn, H. 1988. *Wildfowl, an identification guide to the ducks, geese and swans of the World*. London.
Mayden, R. L. 1997. A hierarchy of species concepts: the denouement in the saga of the species problem. In: Claridge, M. F., Dawah, H. A., & Wilson, M. R. (eds.), *Species: the units of biodiversity*: 381-424. London.
Mayr, E. 1940. Speciation phenomena in birds. *Am. Nat.* 74: 249-278.
— & Short, L. L. 1970. *Species taxa of North American birds*. Cambridge.
Millington, R. 1998. The Green-winged Teal. *Birding World* 11: 430-434.
Palmer, P. 1999. A hybrid Green-winged Teal? *Birding World* 12: 377.
Palmer, R. S. (ed.) 1976. *Handbook of North American Birds*. vol. 2. New Haven.
Parkes, K. C. 1955. Sympatry, allopatry and the subspecies in birds. *Syst. Zool.* 4: 35-40.
— 1958. Systematic notes on North American birds. 2. The waterfowl (Anatidae). *Ann. Carnegie Mus.* 35: 117-125.
Peters, J. L. 1931. *Checklist of Birds of the World*. vol. 1. Cambridge.
Phillips, J. C. 1923. *A Natural History of Ducks*. vol. 2. Boston.
Poole, E. L. 1940. Recent records from Lake Ontelaunee, Pennsylvania. *Auk* 57: 577-578.
Salvadori, T. 1895. *Catalogue of the Birds in the British Museum*. Vol. 27. London.
Sangster, G., Hazevoet, C. J., van den Berg, A. B., Roselaar, C. S., & Sluys, R. 1999. Dutch avifaunal list: species concepts, taxonomic instability, and taxonomic changes in 1977-1998. *Ardea* 87: 139-165.
Schioler, E. L. 1925. *Danmarks fugle*. vol. 1. Copenhagen.
Scott, M. 1999. Identification of female Green-winged Teal. *Birding World* 12: 81.
Simpson, G. G. 1961. *Principles of Animal Taxonomy*. New York.
Stepanyan, L. S. 1990. *Conspectus of the Ornithological Fauna of the USSR*. Moscow. (In Russian)
Vinicombe, K. E. 1994. Common Teals showing mixed characters of Eurasian and North American races. *Brit. Birds* 87: 88-89.
Wiley, E. O. 1978. The evolutionary species concept reconsidered. *Syst. Zool.* 27: 17-26.
Witherby, H. F. 1924. *A Practical Handbook of British Birds*. vol. 2. London.
— Jourdain, F. C. R., Ticehurst, N. F., & Tucker, B. W. 1939. *The Handbook of British Birds*. vol. 3. London.
Zink, R. M., Rohwer, S., Andreev, A. V., & Dittmann, D. L. 1995. Trans-Beringia comparisons of mitochondrial DNA differentiation in birds. *Condor* 97: 639-649.

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Bird Photograph of the Year

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The competition of 2001 marks the silver jubilee of Bird Photograph of the Year and, by way of celebration of this milestone, the judges were treated to yet another superb selection of bird photographs. This is not only the oldest of the awards currently organised by *British Birds*, but undoubtedly one of the most keenly contested. Once again, the standards were exceptionally high, and the entrants included many former winners.

A précis of the rules of the competition may be apposite at this stage. Entrants may submit up to three colour transparencies for consideration, each of which must have been taken during the previous year (in this case 2000). Preference is given to photographs captured in the Western Palearctic, although those of species on the Western Palearctic List taken anywhere in the world are per-

1st	**Herring Gull *Larus argentatus* (plate 122)**	**Roger Tidman (Norfolk)**
2nd	Sandwich Tern *Sterna sandvicensis* and Arctic Skua *Stercorarius parasiticus* (plate 123)	Wayne Richardson (Teesside)
3rd	Little Tern *Sterna albifrons* (plate 124)	Eddie Dunne (Ireland)
4th	Marsh Harrier *Circus aeruginosus* (plate 125)	Mike Lane (West Midlands)
5th	Red Grouse *Lagopus lagopus* (plate 126)	G. H. Higginbotham (Cheshire)
6th	Black-winged Stilts *Himantopus himantopus* (plate 127)	Richard Brooks (Norfolk)
7th=	Little Grebe *Tachybaptus ruficollis* (plate 128)	Hanne Eriksen (Oman)
7th=	Grasshopper Warbler *Locustella naevia* (plate 129)	Mike Lane (West Midlands)
7th=	Common Whitethroat *Sylvia communis* (plate 130)	Mike McKavett (Merseyside)
10th	Grey Partridges *Perdix perdix*	Terry Andrewartha (Norfolk)
11th	Black Grouse *Tetrao tetrix*	G. H. Higginbotham (Cheshire)
12th	Marsh Harrier *Circus aeruginosus*	Roger Tidman (Norfolk)
13th	Tree Sparrow *Passer montanus*	Mike Wilkes (Worcestershire)
14th	Stock Dove *Columba oenas*	Mike Wilkes (Worcestershire)
15th	Atlantic Puffin *Fratercula arctica*	David Tipling (Kent)
16th	Grey Heron *Ardea cinerea*	Jens Eriksen (Oman)
17th	Roseate Tern *Sterna dougallii*	Hanne Eriksen (Oman)
18th	Grasshopper Warbler *Locustella naevia*	R. J. C. Blewitt (West Midlands)
19th	Common Cuckoo *Cuculus canorus*	Robert Snell (Staffordshire)
20th	Song Thrush *Turdus philomelos*	Tony Hamblin (Warwickshire)
21st	Sooty Tern *Sterna fuscata*	Rebecca Nason (Suffolk)
22nd	Grey Plover *Pluvialis squatarola*	Wayne Richardson (Teesside)

Other photographers whose work was included in the initial short-list were: Bill Baston (Suffolk), David Chapman (Cornwall), Tony Clarke (Sheffield), Edmund Fellowes (Dumfries), Peter Glasson (Middlesex), Gabriel González (Spain), Koshy Johnson (East Yorkshire), Reston Kilgour (Essex), Chris Knights (Norfolk), Gordon Langsbury (Berkshire), Harry Lehto (Finland), David Norton (Hampshire), Alan Petty (Kent), Hans Sehouten (The Netherlands) and Steve Young (Liverpool).

The Young Photographer of the Year award, sponsored by the Erie Hosking Charitable Trust, was won for the fifth year in succession by David Norton (Hampshire), and we show one of his set of three photographs here (plate 131). The runner-up in this section, open to photographers aged 25 or under, was Oliver Slessor (London).



122. BIRD PHOTOGRAPH OF THE YEAR. Herring Gull *Larus argentatus*, Norfolk, November 2000 (Canon EOS 3; Canon 500-mm, 1/500, f5.6, Fuji Sensia 100). *Roger Tidman*

Wayne Richardson







124 & 125. (Left) THIRD. Little Tern *Sterna albifrons*, Co. Wicklow, July 2000 (Canon F1-N; Canon 800-mm, with 1.4x converter; 1/125, f8. Fuji multispeed at 400 ASA). *Eddie Dunne*

(Above) FOURTH. Marsh Harrier *Circus aeruginosus*, Poland, spring 2000 (Canon EOS 3; 600-mm f4; 1/125, f8. Fuji Sensia 100, rated at 200 ASA). *Mike Lane*

mitted, too. Apart from these qualifications, the brief is simple: to produce the best and/or the most scientifically interesting bird photograph.

The first stage of the judging process consisted of viewing every entry in the competition, projected on to a screen, when any shot not strongly supported by at least one judge was eliminated. This year, the first round reduced the size of the field from 120 to 55 transparencies. Pausing only to draw breath, certainly not to consider the high quality of some of the work already rejected, a second viewing of the slides ensued. Now the standards were even higher, and after much soul-searching the field was whittled down to a final short-list of 22 entries. Out came paper and pencils, and the judges then independently ranked each entry in the final 22. The resultant scores were combined, checked and double-checked to reveal our winners this year. It should be borne in mind that the judges were not aware of the names of photographers during this process, although for the final short-list they had access to the background notes submitted by contestants to 'set the scene' for their work. The winning photograph is, therefore, effectively chosen 'by committee'. In this year's competition, it was comforting to find that the winner, Roger Tidman, was in fact a very clear winner: placed as 1st, 2nd, 3rd and 4th respectively by the four judges in their individual selections.

Roger Tidman described his winning entry (plate 122) as follows: 'During a visit to a favourite part of the north Norfolk coast I had noticed this Herring Gull dropping mussels, and resolved to return on a sunny day! The tide needed to be low as well, and I endured several frustrating visits before it all came together in November last year.' The judges considered this an exceptional photograph, being beautifully sharp, perfectly exposed, well composed within the frame, and illustrating an interesting aspect of foraging behaviour, to boot. Several shots of Herring Gulls dropping mussels have been submitted to this competition over the years. Most of these have been very good, but, unless absolutely everything comes together, the result is rarely aesthetically pleasing. Roger Tidman has cracked it this year, we feel. For the third year in a row, our winner



126. FIFTH. Red Grouse *Lagopus lagopus*, Yorkshire, 2000 (Canon EOS 5; Canon 300-mm f4 with 1.4x converter; 1/125, f8. Fuji Provia 100). *G. H. Higginbotham*

will receive a full set of the marvellous (14-volume) *Handbook of the Birds of the World*, published by Lynx Edicions.

Wayne Richardson recounts how, during July and August 2000, he made a determined effort to obtain some skua/tern action shots, and chose a north-facing peninsula on the southern shore of Teesmouth for that purpose. Last summer, whenever the weather was decent, Wayne could be found sitting within metres of a flock of terns. 'Experience had taught me that, while most of the harrying took place offshore and usually at some distance, opportunities for photography increased the closer I was to the terns. Adults were frequently waylaid as they searched for their offspring within the noisy throng and/or en route to the flock'. Wayne noted that Sandwich Terns make better 'victims' (for the purposes of photog-



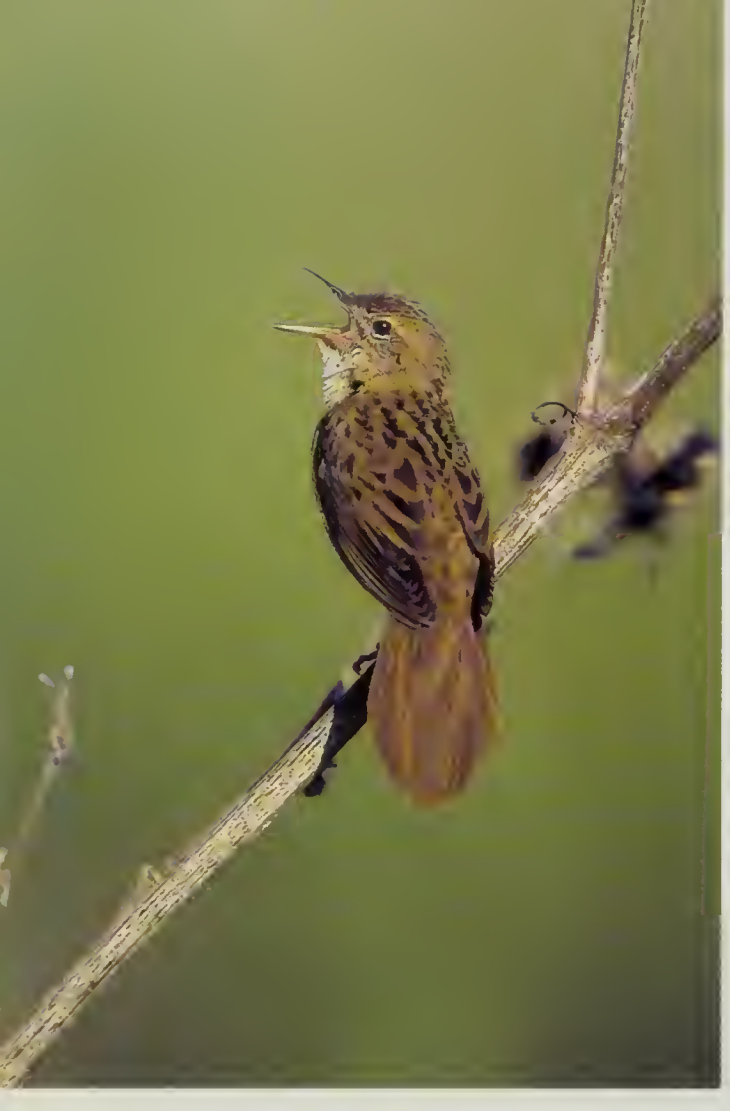
127. SIXTH. Black-winged Stilts *Himantopus himantopus*, Lesvos, Greece, April 2000 (Nikon F100; 500-mm f4, with 1.4x converter; 1/500, f6.3. Fuji Sensia 100, rated at 125 ASA). *Richard Brooks*

raphy!) than the smaller terns, since they tend to hang on to their prey considerably longer. Sometimes the chase was so close to him that he could not get even one bird in the frame, never mind two or three, and he concluded that success was due to a combination of 'being in the right place, at the right distance, and having quick reflexes.' All the judges were impressed with this fabulous action shot (plate 123), and, had the composition been a little better, it would have been a very strong challenger for first place.

Eddie Dunne's enchanting photo of a Little Tern brooding two small chicks at a colony in Co. Kilkerry (plate 124) was the result of a desire to photograph an adult feeding a chick. While waiting for such an opportunity, the chance of this shot presented itself. He recalls that this was probably the only occasion on which the sun went behind a cloud at the right time, since the chicks were otherwise in deep shadow.



128. SEVENTH EQUAL. Little Grebe *Tachybaptus ruficollis*, Muscat, Oman, November 2000 (Nikon F5; Nikkor 600-mm f4, with 1.4x converter; 1/125, f9. Fuji Sensia 50). *Hanne Eriksen*



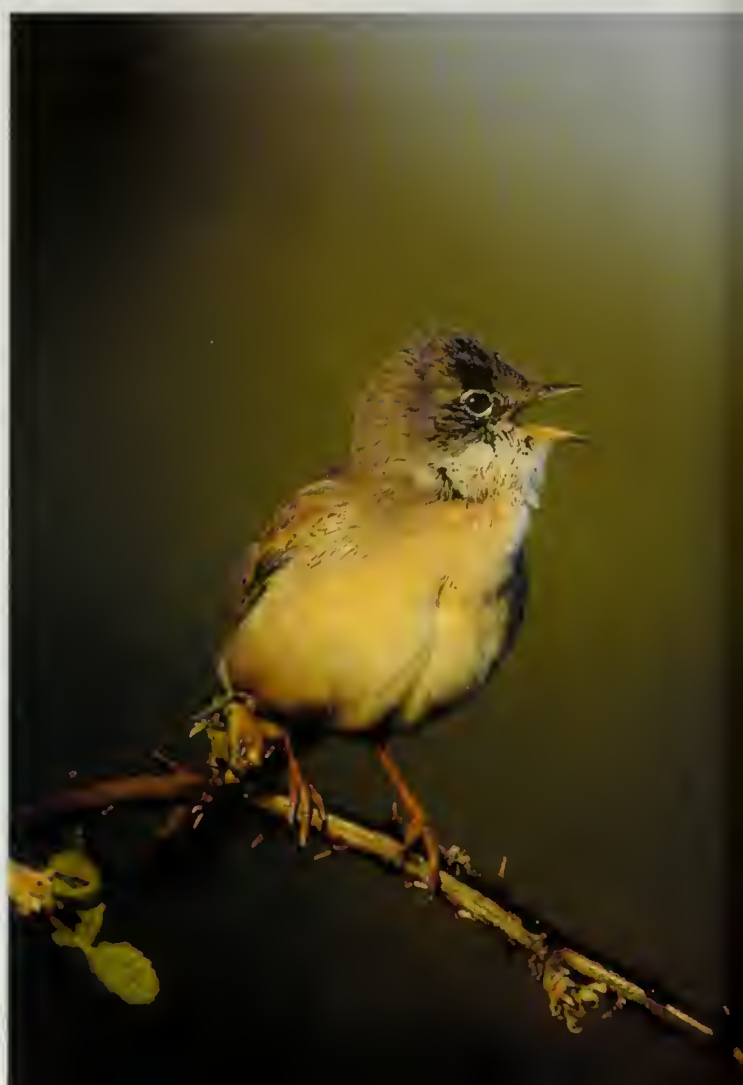
129. SEVENTH EQUAL. Grasshopper Warbler *Locustella naevia*, Poland, spring 2000 (Canon EOS 3; 600-mm f4, with 1.4x converter; 1/350, f5.6. Fuji Sensia 100, rated at 200 ASA). *Mike Lane*

Mike Lane's fourth-placed shot (plate 125), of a nest-building Marsh Harrier in Poland, was taken from a hide at 7.00 a.m. when the sun was still low enough to illuminate the bird's underside. Mike tells us that 'the farmer had cut the hay in a nearby field, and the harrier flew in repeatedly with grass during a period of about 30 minutes'. This is another technically superb shot which, like all of the leading entries, portrays an element of the bird's behaviour; they are not just captivating illustrations, but tell a story as well.

In fifth place is a photo of a Red Grouse (plate 126) which highlights the fantastic, fiery plumage colours of the grouse, in stark contrast to the burnt heather through which it is stepping. The photographer, G. H. Higginbotham, describes the context of his photograph as follows. 'While visiting a Yorkshire moor, I watched a female Red Grouse browsing her way over the young heather. When she reached a strip of burnt heather, she strode across without hesitation, weaving her way through the blackened stems. At one point her path meant that she had to turn and walk towards me.'

The judges felt that the composition and technical excellence of Richard Brooks' portrait of Black-winged Stilts (plate 127), as an action shot of a pair of waders copulating, could not be bettered. Richard comments that 'I was parked alongside a small marsh on the island of Lesvos, where several pairs of Black-winged Stilts were nesting. I knew that a change-over at the nest was often preceded by a courtship ritual, and it was on one such occasion that I was able to capture this brief moment of copulation. Though I managed to achieve several images, this one, showing the water droplets on the male's bill, was my personal favourite.'

Hanne Eriksen's portrait of a stretching Little Grebe (plate 128), early one morning in Oman, provides a rare opportunity to marvel at the gigantic feet and tiny wings of this species. The pin-sharp reflection contributes to a fine example of the results of



130. SEVENTH EQUAL. Common Whitethroat *Sylvia communis*, Southport, Merseyside, April 2000 (Nikon F3HP; 600-mm f5.6; Fuji Velvia 100). *Mike McKavett*



131. The *British Birds* Young Bird Photographer of the Year. Great Skua *Catharacta skua*, Handa, Highland, July 2000 (Nikon 801s; Sigma 500-mm f7.2; 1/125, f7.2; Fuji Sensia 100, rated at 200 ASA). *David Norton*

hide photography, and was the highlight of a morning 'witnessing everything alive waking up and becoming active'.

Mike Lane's second photograph in this year's top ten was, like his first, a result of a spring trip to Poland. The Grasshopper Warbler in plate 129 was photographed from a hide on a regular songpost, and this fine shot required a cool 14 mornings in a hide before the bird sang fully in the open! Another example of the photographer's extreme dedication!

Mike McKavett's image of a singing Common Whitethroat (plate 130) was also obtained from a hide, placed close to a song perch that was regularly used by the territory-holder. Mike's observations revealed that a small patch of isolated brambles *Rubus* was the boundary between two adjacent territories, and regularly used by this individual in response to its neighbour singing from a nearby willow *Salix*.

Finally, notching up an impressive fifth victory on the trot, David Norton's winning entry in the Young Photographer category (plate 131) shows a displaying Great Skua *Catharacta skua* on the island of Handa. An impressive, frame-filling portrait, the image vividly conveys the character of the big, butch, bully-boy Bonxie! David noted that the typical display posture depicted here was assumed whenever other skuas flew over. David will receive a cheque for £100 and an engraved glass goblet presented by the Eric Hosking Charitable Trust.

The prizes for the winner, the second and third places, and the Young Photographer of the Year will be presented at this year's British Birdwatching Fair at Rutland Water, in August. As in past years, a selection of the top photographs will be published in a forthcoming issue of the monthly magazine *Bird Watching*. This link with *Bird Watching* is very much valued, and helps to encourage and develop an interest in bird photography among birdwatchers.

Next year's competition, which will assess photographs taken during the year 2001, will follow the usual format. The rules are printed in the January issue of *British Birds*, and are also available from the address below. We look forward to another competition with similarly high standards!

Dr Roger Riddington, Tim Appleton, Prof. Richard Chandler and Robin Chittenden
c/o British Birds, Chapel Cottage, Dunrossness, Shetland ZE2 9JH

ZEISS

From the Rarities Committee's files

Blyth's Reed Warbler: problems and pitfalls



Alan Harris

ABSTRACT Blyth's Reed Warbler *Acrocephalus dumetorum* remains one of the most difficult identification challenges facing field birders in Britain. This paper describes a case where identification was still not proven, despite the bird being trapped and measured. This example raises a number of important general points regarding the process by which rarities are assessed, in particular the care with which photographic evidence and biometric measurements must be interpreted.

Towards the end of 1997, the British Birds Rarities Committee (BBRC) received a detailed report of a bird identified as a Blyth's Reed Warbler *Acrocephalus dumetorum* at Norwick, Unst, Shetland, in September of that year. After careful consideration, involving two circulations of the report around the Committee and advice from members of the Finnish Rarities Committee, we felt that the identification was unproven. There are several difficult issues surrounding this particular record, which are addressed in the discussion below. One important lesson to learn from this example is that, when BBRC 'rejects' a record, the Committee is not necessarily concluding that the bird in question was not of the claimed species. In this particular case, BBRC felt that, although the Unst warbler *may* have been an atypical Blyth's Reed Warbler, there were sufficient doubts about its identity to make the acceptance of it as

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such unsafe. In many ways, the situation with this record is very similar to the report of a Long-toed Stint *Calidris subminuta* on South Uist, Outer Hebrides, in 1990 (Bradshaw & Lansdown 1998).

Immediately below, we include the full description (with minimal editing) of the Unst warbler as submitted by Mike Pennington, together with brief supporting notes from Keith Vinicombe.

Description

On Tuesday 16th September 1997, I received a phone call from Gilbert Gray of Valyie, Norwick, to discuss a small brown warbler in his garden 'which resembled a Reed Warbler *A. scirpaceus* but wasn't quite right'. I arrived at about 18.30 hours that evening, and discovered the warbler in a patch of raspberry canes. It looked like a Reed Warbler, but I also felt that there was something not quite right about it. I took the following brief notes:

> It was obviously an *Acrocephalus* warbler, but something about its movements in particular made it stand out. It was rather sedate and precise, without the usual nervous skittishness of a Reed Warbler. It looked small, and cold brown in colour, resembling a Garden Warbler *Sylvia borin* in some respects. The supercilium was very short, not extending behind the eye, and was broadest in front of the eye. The wings looked short, and the primary projection was shorter than the exposed tertials, but this was difficult to see properly as it hopped around among the canes. The legs were very obviously grey, and the bill looked rather long. It called once, a short 'tuc', rather like a *Sylvia* warbler but not so sharp.

I watched the bird for about five minutes before it shuffled out of view, and I failed to relocate it that evening. It was obvious that the bird needed to be checked carefully, however, and later, after perusing the relevant literature, I was even more convinced. The call in particular seemed to clinch it, and I was convinced that I had just seen a Blyth's Reed Warbler! I also realised that a great deal more work needed to be done before I could claim it, although I did mention my suspicions to Gilbert.

I returned to Valyie the following evening, when Gilbert confirmed that he had seen the bird during the day. Paul Harvey, however, had also visited earlier that day, and seen only a 'fairly ordinary-looking' Reed Warbler. I erected a mist-net and within half an hour I had trapped an *Acrocephalus* warbler. As soon as I took the bird out of the net, however, I was disappointed. It was distinctly rufous in colour, and, although the supercilium was prominent only in front of the eye, it did not bulge. After checking the wing formula and referring to Svensson (1992), I established that this bird was simply a Reed Warbler, although it had quite a short wing (65 mm).

The next day, Gilbert phoned to say that he had been watching a Reed Warbler in the garden, and he was adamant that it was unringed. Despite further visits, however, I failed either to see or to trap it. During the following weekend, several birders visited Valyie and Gilbert informed them that there was a possible Blyth's Reed Warbler in the garden, but, although some saw a Reed Warbler, no-one saw anything that looked more interesting.

On Thursday 25th September, I visited Valyie in the evening, with the intention of trapping some of the 60 or so Common Redpolls *Carduelis flammea* that had roosted there the previous evening. Checking my nets just before dusk, I discovered that I had trapped a ringed Reed Warbler. This seemed to support my suspicion that there was only one *Acrocephalus* warbler present, but after extracting it I noticed another '*Acro*' in the shelf below. As it hung upside-down, the first thing I noticed was its distinctly grey legs and colder plumage colour compared with the bird I had just handled. A check of the wing formula of the new bird quickly confirmed that its identification was not going to be nice and clear-cut. Since it was already quite late, I decided to take in both warblers overnight for roosting. This would allow sufficient time for me to take detailed descriptions, and to take photographs in the morning in better light, and also for other birders on Unst to see the two birds. Since I had a Reed Warbler for comparison, I decided to take a description of this first, to allow comparison with the second bird. Comparisons with the Reed Warbler are included below, where relevant, in square brackets.

'Blyth's Reed Warbler' description

Size and structure

	Unst Warbler	*Blyth's Reed Warbler**	*Reed Warbler**
Wing length (mm)	63	*58-65*	*62-73*
Bill length to feathering (mm)	12.5	*11.5-15.0*	*12.1-16.5*
Tail length (mm)	48	*48-54†*	*48-55†*
Tail rounded (mm)	4	*4.0-10.0†*	*3.0-7.0†*
Tail/wing ratio	0.76	*0.74-0.86*	
Primaries (numbered ascendantly, i.e. P1 is the outermost, vestigial primary)			
2nd primary =	P5	*P5/P7*	*P3/P5*
Emargination of outer webs	P2-P3, slight P4	*P2-P4, sometimes P5*	*P2-P3, sometimes P4*
Wing-point	P3	*P3, sometimes P3-P4*	*P3*
P1 (mm > primary coverts)	+1.0	*+2.5/-3.0*	*+2/-4*
P2 (mm < wing-point)	3.5	*3.0 - 6.0*	*0.5 - 2.5*
Notch on P2 (mm)	12.0	*10.5-14.0*	*11-15*
P3	wing-point		
Notch on P3 (mm)	11.0 (indistinct)		
P4 (mm < wing-point)	1.5	*-0.5 to +0.5†*	*1 - 3†*
P5 (mm < wing-point)	3.5	*1 - 2.5†*	*3 - 5.5†*
P6 (mm < wing-point)	6.0	*2 - 6†*	*5 - 8†*
Secondaries (mm < wing-point)	13.0	*11.5-16.0*	*15.0-19.0*

* Typical measurements for Blyth's Reed and Reed Warblers, from Svensson (1992) or *BWP* (†)



Mike Pennington

132. Unidentified *Acrocephalus* warbler, Unst, Shetland, September 1997.

Several aspects of the wing formula of this bird were quite subtle. It had a less obviously rounded wing-tip than is usual for Blyth's Reed Warbler according to Svensson (1992), with an obvious wing-point at P3, and P2 about the same length as P5. The emargination on P4 was very slight, and was more evident on the left wing, where it was obvious that the pale edge to the feather was missing. This would not have been an easy bird to identify in worn plumage. The notches were, however, long and characteristic; the notch on P2 was level with the secondaries while the notch on P3, although less distinct, was still clear and was level with the inner primaries, only just short of the secondaries. The exposed primary length was also characteristically short, with just 13 mm extending beyond the longest secondaries. The exposed primary projection was only about two-thirds the length of the tertials. There were seven exposed primary tips on the closed wing, although the longest two were very close and would have been difficult to separate in the field.

The Reed Warbler had a more pointed wing-tip, with P3 4 mm longer than P2 or P4, and P6 a clear 9 mm shorter. There was a difference of 18 mm between the wing-tip and

the secondaries, despite the relatively short wing length of 65 mm. In the hand, the exposed primary projection was clearly longer than the tertials.]

The tail appeared very short, contrary to some reports of Blyth's Reed Warbler. [In comparison, the Reed Warbler looked much longer-tailed.]

The bill length was similar on the two birds, about 12 mm, but the bill looked longer on the Blyth's Reed Warbler. This was due to the different head shape of the two birds. The Blyth's Reed Warbler had a more rounded head shape, but the peak of the head was set well back with a long, low, gently sloping forehead which ran smoothly towards the base of the bill, emphasising the bill length. [The Reed Warbler had a more angular head shape and a slightly steeper forehead.]

Plumage

HEAD. The supercilium comprised a large, almost circular patch on the lores, in front of the eye, off-white in colour with no warm tones. The supercilium extended above the eye (where it merged with a fairly distinct buff-white eye-ring) and also arched forward above the bill. From the front it could be seen that the supercilia were separated by only about half the width of the bill. There was a small, distinctly ginger patch at the base of the



bill. The lores were pale with dark speckling, so that there was no obvious loral stripe. However, a small gap at the front of the distinct buff-white eye-ring, and a slightly broader gap at the rear helped give the impression of a very indistinct short eye-stripe. The ear-coverts were greyer than any other part of the plumage.

[The Reed Warbler also had a supercilium which did not extend behind the eye, and it also bulged very slightly in front of the eye. It was, however, much less pronounced than that of the Blyth's Reed Warbler, and did not reach the bill, or extend above it on the forehead. The Reed Warbler's supercilium was also distinctly warmer, buff-white. There was also a more pronounced (but still indistinct) loral stripe.]

UPPERPARTS. Overall, these were a cold earth-brown with a slight olive tone, slightly greyer on the crown, nape and ear-coverts. The rump and uppertail-coverts were very slightly



Mike Pennington

133. Unidentified *Acrocephalus* warbler, Unst, Shetland, September 1997.

warmer, but nothing like the ginger tones on the Reed Warbler.

The lesser and median coverts were dark grey, with narrow and indistinct olive-brown fringes. The greater coverts showed a slightly warmer brown fringe, but still with very little contrast with the feather centres. The primary coverts were dark grey with a very narrow olive-brown fringe. The inner webs of the alula feathers were dark grey with a very narrow pale edge. The outer webs were paler grey, fading into a broader, more diffuse brownish fringe. The overall appearance of the coverts was dark and uniform, showing very little contrast between the edges and the centres of feathers. The remiges were dark grey, the primaries with very narrow pale brownish fringes on tips and outer webs, the secondaries with slightly wider fringes. The tertial fringes were slightly wider still, but again with very little contrast, diffusing into the grey centre. On the closed wing, the primaries had narrow whitish tips. The rectrices were browner than the remiges, with very little contrast with the feather fringes.

[The Reed Warbler had an obvious ginger rump which contrasted sharply with the back, while the broad, warm brown fringes on the wing-coverts contrasted strongly with darker centres, although the fringes on the lesser coverts were so broad that they appeared solidly warm brown.]

UNDERPARTS. Cold creamy-buff, very slightly warmer on the flanks, paler on the belly and throat (which were off-white). [The Reed Warbler had much warmer buff underparts.]

Bare-part coloration

Legs dull grey, on close examination showing a similar pattern to the Reed Warbler, with a yellow-ochre tone to the rear of the tarsus, the toes, and especially the soles. [The same areas were, however, much brighter on the Reed Warbler.]

The upper mandible was dark horn, with a paler cutting edge and a distinct pale tip. The lower mandible was yellow-straw, with a slight pink tone at the base on the underside and a slightly dusky tone towards the tip on the sides. The gape was bright yellow. [The bill pattern of the Reed Warbler was almost identical, but with a more obvious dusky area on the lower mandible, and a less obviously pale tip on the upper.]

The iris was mud-brown.

Call

A short 'tuc' was heard in the field only on the first date. [The Reed Warbler called several times in typical fashion in the hand, but the Blyth's Reed was silent in the hand.]

M. G. Pennington

Mike Pennington's description was supported by the following notes from Keith Vinicombe (copied directly from KEV's notebook), written shortly after the observations. The warbler was also seen by M. S. Ponsford.

'A very frustrating bird, with numerous brief views so that it was never possible to see the whole bird at once. It was very wary and difficult to approach.

'Definitely smaller than Reed Warbler, and the tail looked a bit shorter to me. Bill noticeably quite long and spiky, with rather a pointed tip. The spiky bill was noticeable even in flight during one prolonged view. Somewhat browner than my previous British Blyth's Reed Warblers. When flushed, it looked noticeably pale, but appeared cold grey-brown at rest. The throat was white but the underparts were buffy-white, paler than Reed Warbler. The undertail-coverts were white, with a slight but distinct buff tint apparent with close views, not nearly so deep buff as Reed Warbler. Wings noticeably plain and definitely short. In flight, this produced a distinctly fluttery flight – the bird looked quite short-winged and round-winged in flight. Noticeable cream eye-ring, and a clear-cut cream line before the eye, which bulged on the upper edge. Legs grey with dull lime-green feet. The bird habitually cocked its tail when feeding, at c. 30-45°.

'In flight, it looked more evenly proportioned than Reed Warbler. It completely lacked the rusty tones and *strong* buff tones of Reed Warbler.

'The bird was viewed down to a few yards range through 8×42 binoculars. There was also a Reed Warbler present in the garden but the two were not directly compared. The Blyth's Reed Warbler kept low in the vegetation and sometimes flew out into a nearby ditch when flushed. On one occasion it went some distance down the hill and into some irises. When flushed out of these irises, I obtained a prolonged flight view as it swung out past me in a long arc.

'This was my third Blyth's Reed Warbler in total. I may be over-confident but they seem pretty distinctive to me. However, I'm probably at an advantage since I am very familiar with Reed Warbler as a consequence of the fact that we have 800 pairs breeding at my local patch at Chew!'

First circulation

The first circulation consisted of the two descriptions reproduced above, and two photographs (plates 132 & 133). During this circulation, BBRC members identified a number of potential problems with the record. Pre-eminent among these was that the accompanying photographs were at odds with the descriptions. The photographs showed a warm brown bird with a rusty rump, obvious dark centres to the tertials and primaries, and missing feathers on the forehead giving a strange appearance to the front of the face. While understanding that the colour tones on the photographs might not be accurate (and therefore could be different from the two descriptions), Committee members who examined the photographs raised the following concerns.

- The bill looked typical of Reed Warbler in shape, being long and thin, and lacking the broader, deeper base characteristic of Blyth's Reed Warbler.
- The colour of the upperparts was intermediate between the two species, but closer to that of a typical Reed Warbler.
- The tertials showed a significant contrast between the dark centres and pale fringes, characteristic of Reed Warbler.
- The emargination on the outer web of P4 was not visible in the photos (plates 132 & 133). (This feature is usually quite obvious in photos of Blyth's Reed Warbler.)
- There was no emargination on the outer web of P5.
- There was, in fact, no supraloral bulge; this effect was merely an artefact caused by missing feathers on the forehead.
- There were eight exposed primaries on the closed wing.

After close examination of the biometric data, other concerns were identified:

- The emargination on P4 was described as slight. Reed Warbler can show slight emargination on P4 and, typically, Blyth's Reed Warbler shows reasonably distinct emargination on P4 (although it can be absent).
- P2 of equal length to P5. This feature is no better for Blyth's Reed than for Reed Warbler. On Blyth's Reed, the tip of P2 usually falls between the tips of P5 and P7.
- The notch on P2 could be compatible with either species.
- The wing length was short, but within the range of Reed Warbler.

In conclusion, we felt that the only factors supporting the identification as Blyth's Reed Warbler were the call, the notch on P3 (which Reed Warbler can occasionally show), and the distance between the secondaries and the wing-point (13 mm on this bird, which is within the typical range of Blyth's Reed Warbler, but shorter than on Reed Warbler). Concern was also expressed about some of the practical problems of taking accurate measurements in the field, particularly in cases like this where minor differences of one or two millimetres can lead to a misidentification.

Two members voted to accept the record, and eight to pend it for further expert opinion.

Expert advice

We contacted Hannu Jännes by e-mail to seek his opinion of this record. Unfortunately, the images that accompanied the descriptions were more red-toned than the originals. He judged the record mainly on the photographs, and replied as follows:

'The two enclosed photographs show several characters which do not fit Blyth's Reed Warbler, but are rather typical for a Reed Warbler. One of the most striking features is the very dark, almost blackish, colour of the tertials, primaries and rectrices [in plate 132]. This (if not caused by photographic effects, such as bad light, poor reproduction etc.) is one of the best characters to separate Reed Warblers (even the more difficult, less rufous individuals) from Blyth's Reed and Marsh Warblers *A. palustris*, which show much paler, greyish-brown centres to the flight feathers. In their first autumn, Blyth's Reed Warblers have pale, greyish flight feathers which are rather concolorous with the rest of the upperparts, never (at least in my experience) creating such an obvious contrast between blackish flight feathers and the rest of the body as on this bird. The other photograph [side view, plate

133] does not show such a dark tail and wing, but this is often the case in photos taken from this angle (as I have learned to my cost from several misidentified mystery photographs).

'In the photographs, the degree of contrast between the pale (rufous) tertial fringes and dark centres is too strong for Blyth's Reed Warbler, but OK for Reed Warbler. The rather strong rufous colour of the rump, lower mantle and longest uppertail-coverts also does not seem to fit first-autumn Blyth's Reed. All first-autumn Blyth's Reed Warblers which I have seen in Finland have been greenish birds with no (or only very faint) rufous tones to the rump and innermost greater coverts.

'Some other details which do not seem to fit Blyth's Reed Warbler are:

- The flanks seem to be too rufous, too warm-coloured.
- The face pattern is odd, not typical for Blyth's Reed Warbler.
- The shape and length of the bill doesn't seem to fit Blyth's Reed, but looks OK for Reed Warbler.

'I admit that there are some points in the description that seem to point towards Blyth's Reed Warbler (such as colour of the alula, call, primary projection), but the photographs do not support this identification. I showed these photos to some other experienced *Acrocephalus*-ringers and they all identified the bird as a Reed Warbler! On the basis of the available information, I would not accept this bird as a Blyth's Reed Warbler. To me, it looks like a rather normal Reed Warbler with somewhat atypical wing formula. Of course, all kinds of hybrids are possible, too....'

Second circulation

We added Hannu Jännes's analysis, and a series of slides showing this bird in the hand alongside the Reed Warbler (see plates 134-136), to the first circulation. These slides showed that the bird was less rusty than suggested by the original photos but still had some reddish tones on the rump. They also confirmed the abnormal feathering on the forehead, the dark centres to the tertials and primaries, and clear contrast between the centres and edges of these feathers. On these slides, the differences in plumage tone and



Wendy Dickson

134. Reed Warbler *Acrocephalus scirpaceus* (right) and unidentified *Acrocephalus* warbler, Unst, Shetland, September 1997.

feather contrast between the putative Blyth's Reed Warbler and the Reed Warbler were relatively minor, leading more than one member to observe that 'it's difficult to tell which is which!'.

Members also commented that 'From the photographs, it would seem odd that this suggested Blyth's Reed Warbler in the field. In terms of structure, since the notch on P3 can be shown by Reed Warbler, it is only the short primary-projection measurement (13 mm) that fits Blyth's Reed exclusively, and this feature is not apparent in the slides alongside Reed Warbler. The spacing of the primary tips also fits Reed Warbler better, according to *BWP*. The tail/wing ratio is also not very helpful and, like most biometrics, is in the overlap zone between the two species. Six primary tips beyond the tertials would have been a better character for Blyth's Reed, but seven tips can be shown by either (and there is a suggestion that the Unst warbler shows eight in some photos).'

At the end of the second circulation the record was unanimously considered to be unproven.



Wendy Dickson

135. Reed Warbler *Acrocephalus scirpaceus* (right) and unidentified *Acrocephalus* warbler, Unst, Shetland, September 1997.



Wendy Dickson

136. Unidentified *Acrocephalus* warbler, Unst, Shetland, September 1997.

Discussion

This record illustrates many of the problems with record assessment, and highlights some of those specifically associated with difficult species pairs. We encourage the submission of photographs with records but, occasionally, this may be to the observer's disadvantage. There have been several recent records where a contradiction has been evident between photos and the written description of features. This may be due to variations in colour tone and contrast, often as a result of photographic processing. This was particularly obvious in the case of the claimed record of South Polar Skua *Catharacta maccormicki* in 1993, which is still unresolved. For the vast majority of records, such discrepancies are immaterial because we make allowances for this in the assessment process. With a high-profile record (such as the 'South Polar Skua') or where there is overlap with other species in some characters (as in this case), however, it is rather more difficult, particularly when we go to outside experts, who often seem to place more weight on photographs than on the written description. When there is a clear discrepancy in colour tone between photos and the description, observers would be well advised to check with their processing labo-



David Tipling/Windrush

137. Blyth's Reed Warbler *Acrocephalus dumetorum*, India.



Roger Riddington

138. Blyth's Reed Warbler *Acrocephalus dumetorum*, Fair Isle, Shetland, June 1996.



Roger Riddington

139. Blyth's Reed Warbler *Acrocephalus dumetorum*, Fair Isle, Shetland, September 1996.

ratory to determine whether it would be possible to reprint the images more accurately.

Of course, even the most objective observers cannot recall with complete accuracy the colour tones of a bird which they saw a few days previously. There can be no doubt, however, that descriptions often convey what the observer *expected* the bird to look like, and even the most objective observer may fall into this trap. In such cases, photographs at variance with the written description may, indeed, be a more accurate representation of reality. Mike Pennington commented on the photographs as follows. 'These ... rather shocked me when I saw them. I almost didn't submit them, since they didn't look like the bird I saw. I could tell the birds apart easily in real life. When we photographed the two birds side-by-side, they looked to be completely different colours but the photos show two virtually identical birds! I cannot explain this, since I would have thought that any changes in colour due to the photographic process would have affected both plumages similarly. I agree with your comments about the vagaries of film stock, scanning, reproduction etc., which can alter the colour of a bird quite dramatically.'

Another very obvious difficulty with record assessment is the possible subjectivity of observers when judging certain features and the importance of the latter for specific identification. With 'difficult' species pairs (or groups), such as the reed warblers and the treecreepers *Certhia*, there is often a degree of overlap in many features. Observers who believe that they have found a rare bird often assume that measurements in the overlap zone support their identification of the rare species. BBRC, however, is always more likely to favour the common species since, by definition, these are more likely to occur than are rare species. In the case of the Unst warbler, the measurements and wing formula were not diagnostic of either of the two possible species: photographs favoured the commoner one, while the description was more in keeping with the rare species.

We tend to think of biometrics as 'gospel truth' but, as Mike Pennington pointed out subsequently, 'I think it is worth stressing that taking biometrics on a live bird is not as exact as some people think. Arguing over a half or one millimetre is sometimes irrelevant since that is well within the range of recorder error, especially with biometrics taken by a single observer under pressure with a rarity. Since the wing formula fitted, I did not take the measurements twice because the bird had already been handled enough.'

Another problem that we identified in this instance was that of the use of 'new technology' for record assessment. The quality of image that we can transmit electronically is often less good than one would wish for when making such critical assessment. This creates problems when obtaining expert opinion from abroad. We like to do this with as little delay as possible, but have run into problems with our experts missing the level of critical detail that is available on the original photos. As computer technology improves this will be less of a problem, but it does suggest that purely electronic methods of record assessment by BBRC are as yet some way off.

BBRC will continue to scrutinise all field-only records of Blyth's Reed Warbler with great care, since members consider that this species still represents one of the most difficult challenges facing the field birder. This may be at variance with the views of some observers, supported by the populist birding press, who feel that Blyth's Reed Warbler is now a fairly straightforward bird to identify in the field.

Acknowledgments

BBRC is grateful to both Mike Pennington and Keith Vinicombe for allowing the use of their descriptions, and also to Hannu Jännes for gathering the opinions in Finland.

References

Bradshaw, C., & Lansdown, P. G. 1998. From the Rarities Committee's files. A report of Long-toed Stint on South Uist. *Brit. Birds* 91: 180-184.

Cramp, S. (ed.) 1992. *The Birds of the Western Palearctic*. vol. 6. Oxford.

Svensson, L. 1992. *Identification Guide to European Passerines*. 4th edn. Stockholm.

Colin Bradshaw, on behalf of BBRC
9 Tynemouth Place, Tynemouth, Tyne & Wear NE30 4BJ

The British Birds Rarities Committee is sponsored by Carl Zeiss Ltd.

Notes

Kentish Plovers with a complete breast-band

In winter, a large flock of 2,000-3,000 Kentish Plovers *Charadrius alexandrinus* is found in the Deep Bay area of Hong Kong. At high tide, these often form a single flock with a similar number of Dunlins *Calidris alpina*. Searching through this flock can be productive, and has resulted in records of Greater Ringed Plover *Charadrius hiaticula* and occasional winter records of Spoon-billed Sandpiper *Eurynorhynchus pygmeus*.

When searching through the flock, I have also found a small number of Kentish Plovers with a complete breast-band, similar to those detailed by Chandler & Shirihai (1995). The first of these, a summer-plumaged male, was discovered on 10th March 1994. The following details were noted:

> Small *Charadrius*, identical to other Kentish Plovers except with complete breast-band. Broad black mask through eye, with narrow white supercilium from forehead to behind eye. Small black patch above forecrown. Mantle colour as Kentish Plover, or slightly darker. Broad white collar on nape. Black breast-band complete but slightly narrower in the centre. Throat slightly paler than rest of off-white underparts. Legs black. Bill structure similar to that of nearby Kentish Plovers.



Ray Tipper

140 & 141. Kentish Plover *Charadrius alexandrinus*, Deep Bay, Hong Kong, 1st February 1995.



Ray Tipper

The bird was so similar to Kentish Plover, except for the presence of the breast-band, that I could not believe that it was not that species. The only other option I could think of at the time was Malaysian Plover *C. peronii*, a species with which I am not familiar. In that species, males lack a complete breast-band but have a black hind-neck-collar (Hayman *et al.* 1986).

The same or another individual was seen on 24th March 1994, and in subsequent winters non-breeding adults or adult females with a complete breast-band were noted in January and February 1995, and February 1996. The individual in February 1995 was photographed by Ray Tipper (plates 140 & 141).

Chandler & Shirihai (1995) detailed eight records from Israel of

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female Kentish Plovers with a eomplete breast-band. They noted that all but one of the birds whieh they diseussed were adult summer females, and the eighth was possibly largely in breeding plumage. This agreed with the deseription by Cramp & Simmons (1983) of adult female breeding Kentish Plover rarely showing a eomplete breast-band. It is possible that, other than the adult breeding male, the records in Hong Kong related to adult females in breeding plumage, sinee, even by early February, many males are in full breeding plumage in Hong Kong. The diffuse head pattern of the bird in plates 140 & 141 may, however, indieate that this individual is in non-breeding plumage (Hayman *et al.* 1986).

These reeords are additionally of note sinee a different subspecies of Kentish Plover is involved. The race that winters in south China is *C. a. dealbatus* (Cheng 1987), which is restricted to Japan and eastern China (Hayman *et al.* 1986). Although not stated by Chandler & Shirihai (1995), Kentish Plovers oeurring in Israel are of the nominate raee (Shirihai 1996).

References

Chandler, R. J., & Shirihai, H. 1995. Kentish Plovers with complete breast-bands. *Brit. Birds* 88: 136-140.

Cheng, T. H. 1987. *A Synopsis of the Avifauna of China*. Beijing.

Cramp, S., & Simmons, K.E.L. (eds.) 1983. *The Birds of the Western Palearctic*. vol 3. Oxford.

Hayman, P., Marchant, J. H., & Prater, A. J. 1986. *Shorebirds: an identification guide to the waders of the world*. London & Sydney.

Shirihai, H. 1996. *The Birds of Israel*. London.

Paul J. Leader
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EDITORIAL COMMENT Riehard Chandler has eommented: 'There have, of eourse, been other reports of Kentish Plovers (ineluding males) with a eomplete breast-band in Japan (*Brit. Birds* 89: 93-94). Takano *et al.* (1985) ineluded a photograph of a mating pair of Kentish Plovers, the male of whieh had a well-developed, eomplete blaek breast-band. I saw similar individuals near Tokyo in May 1997. They appear to oeeur with moderate frequency in the Japanese population.

'It appears that the more easterly populations of Kentish Plover, of whatever race, are more likely to exhibit a eomplete breast-band and that, at least in *C. a. dealbatus*, both sexes ean show this feature. There do not appear to be any reeords of the Ameriean raee, "Snowy Plover" *C. a. nivosus*, with a eomplete breast-band.'

Reference

Takano, T., Hamaguchi, T., Morioka, T., Kanouchi, T., & Kabaya, T. 1985. *Wild Birds of Japan*. Tokyo.

Kleptoparasitism by Hobby

During a visit to Wieken Fen, Cambridgeshire, on 11th June 2000, I was in the Tower Hide watching a Barn Owl *Tyto alba* hunting during the early afternoon. Having eaught what appeared to be a small mammal, the owl was presumably returning to its nest when a Hobby *Falco subbuteo*, perhaps a male, flew low and rapidly towards it, flipped over as if to exeeute a 'food pass', and stole the prey from the owl's talons, making off with it sueeessfully. The owl continued hunting, apparently unperturbed, and was later seen over the same field.

Michael Thain
Upper Cairnryan, Harrow Park, Harrow, Middlesex HA1 3JE

EDITORIAL COMMENT Although kleptoparasitism has been reeorded for the Hobby (*BWP*; Chapman 1999, *The Hobby*), we are not aware of an instanee where a Barn Owl has been the victim.

Common Coot eating crayfish

On 10th June 2000, at Hauxton, Cambridgeshire, I observed a Common Coot *Fulica atra*, accompanied by three small chicks, emerge from a small lake with a large, struggling object in its beak. The adult proceeded to shake and peck at the prey, and feed small scraps to the chicks. Since I was not carrying binoculars at the time, I walked over to examine the item, and was surprised to find that it was a crayfish (Astacidae) about 15 cm long. The abdomen had been partially eaten but the creature was still alive.

When I withdrew, the coot returned to continue dismembering the crayfish and feeding it to its chicks. A relatively large crayfish seems to be a surprising food item for a Common Coot, and is not mentioned in *BWP*.

Robin Cox
Linden House, Long Lane, Fowlmere, Cambridgeshire SG8 7TG

Common Redstart eating lizard tail

During the afternoon of 4th July 2000, I was working in my garden in Brezzo di Bedero, Varese, Italy. A pair of Common Redstarts *Phoenicurus phoenicurus* was catching arthropods close by, devouring smaller items on the spot, and carrying the larger ones to their nest. Suddenly, the female flew on to a stone wall, seized upon something beneath a creeping plant growing on the wall, and brought the prey item on to bare ground by the wall. I was astonished to see that it was the tail of a Wall Lizard *Podarcis muralis*, evidently taken from the owner! The redstart tried to subdue the whirling tail three times, as if it was a worm, and after eventually breaking it in two flew off with the larger part. I could see the remaining piece, the tail tip, which was at least 25mm long and still moving. A few minutes later the female arrived again in the same place, but ignored the remaining part of the tail, perhaps because by that time it was still. In previous days, I had wondered why many of the lizards in my garden had no tail, or a new one.

Paolo Pavan
Via delle Betulle 6/a, 21010 Brezzo di Bedero, Varese, Italy

EDITORIAL COMMENT There are records of larger thrushes (for example Song Thrush *Turdus philomelos* and Blackbird *T. merula*), and Robins *Erithacus rubecula* attacking lizards (*Brit. Birds* 59: 76), but we are not aware of any documented examples of Common Redstarts doing so.

Juvenile Blue Tit feeding another juvenile

On 16th June 2000, in my garden at West Bagborough, Somerset, I observed two juvenile Blue Tits *Parus caeruleus* (well grown, with distinct yellow cheeks, and typical juvenile plumage) extracting peanut fragments from a feeder. Suddenly, one Blue Tit offered a peanut piece to the other, which was accepted with alacrity. The latter individual then began to beg, and was fed with peanut fragments on at least three occasions before both birds flew off. This type of behaviour by Blue Tits is not mentioned in *BWP*.

Dr A. P. Radford
Crossways Cottage, West Bagborough, Taunton, Somerset TA4 3EG

Carrion Crow feeding from plucked heads of Common Reed

On 25th May 2000, at Strumpshaw Fen RSPB Reserve, Norfolk, I watched a Carrion Crow *Corvus corone* repeatedly fly low over the reedbed, and while in the air skilfully pluck off the flowering head from a stem of Common Reed *Phragmites australis*. The crow then returned to a dead tree in the middle of the marsh, where it proceeded to pull apart the flowering head with its bill, while holding it between one foot and the branch. It appeared to be feeding either on the *Phragmites* seeds or, possibly, on insects or spiders contained within the stem. This behaviour was repeated on many occasions over a period of about half an hour. I can find no reference to such feeding behaviour in *BWP*, nor is Common Reed included in the list of food plants utilised by Carrion Crows.

Dr Moss Taylor
4 Heath Road, Sheringham, Norfolk NR26 8JH

EDITORIAL COMMENT Several members of the Behaviour Notes Panel suggested that the crow was most likely feeding on invertebrates contained within the seed heads. Ian Dawson commented that two species of spider, *Larinioides cornutus* and *Clubiona phragmitis*, occur regularly in the seed heads of Common Reed, and that both are reasonable-sized spiders, which would make a useful supplement to a crow's diet.

Canary apparently drinking nectar from flowers

On 5th December 1999, I visited the Botanic Gardens near Puerto de la Cruz, Tenerife. The gardens contain some fine specimens of tropical and subtropical plants, and those in fruit were attracting good numbers of Blackbirds *Turdus merula* and Common Chiffchaffs *Phylloscopus collybita*. A flock of up to 12 Canaries *Serinus canaria* drew attention by their persistent attraction to one particular tree, which was in blossom rather than in fruit. The flowers were vivid scarlet, in vertical racemes near the end of its branches, each flower standing erect to a height of about 10 cm.

The Canaries stood on the branches of the tree, inserted their bills into the base of the almost tubular petals and drew their bills along the petal to the tip, repeating the process from petal to petal. I concluded that the Canaries were drinking from these petals, and that the fluid was the nectar of the plant. The tree was named as the Coral Tree *Erythrina corallodendron* from South America. Cramp & Perrins (1994) mention Canaries pecking at the base of *Agave* flowers (another native of the New World) to obtain nectar, but do not include *Erythrina* nor this behaviour of drinking from petals. Proctor *et al.* (1996), discussing the syndrome of bird pollination, state, however, that 'good examples of adaptation to different types of bird are seen in the genus *Erythrina*', quoting examples from Indonesia and America. In a state of nature, the Canary and the Coral Tree would never meet, but in the Botanic Gardens of Puerto de la Cruz the two species seem well suited.

References

Cramp, S., & Perrins, C. M. (eds.) 1994. *The Birds of the Western Palearctic*. vol. 8. Oxford.

Proctor, M., Yeo, P., & Lack, A. 1996. *The Natural History of Pollination*. London.

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Letters

A letter by Dr W. R. P. Bourne entitled 'The commercialisation of ornithology' was published in *British Birds* in 1999 (*Brit. Birds* 92: 260-261), and stimulated a response from Ian Moorhouse and from Anand Prasad. Sadly, these letters were not published at the time, an omission for which we apologise. The original letter is reproduced below, together with the replies by Ian Moorhouse and Anand Prasad. ***Eds***

The commercialisation of ornithology

It seems strange that a seven-line suggestion by Ian Moorhouse (*Brit. Birds* 91: 330) that an increase in the average age of observers might explain a decline in the number of common birds should be considered worth nearly two pages of rebuttal by the Director of the British Trust for Ornithology (*Brit. Birds* 91: 374-376), and deserves careful scrutiny. Surely it is not really surprising to find that some bird populations fluctuate with such factors as the climate and human use of the land? Most of the losses have been balanced by other gains, and really the only species obviously threatened in Britain by human activity at the present time is the Corn Crake *Crex crex*, which is already being cared for by other people.

One receives a growing impression that many of the current stream of appeals from all our ornithological organisations to save such species as the Sky Lark *Alauda arvensis*, Song Thrush *Turdus philomelos*, Corn Bunting *Miliaria calaudra* and Northern Lapwing *Vanellus vanellus* are not really aimed so much at the welfare of the birds (usually well able to take care of themselves) as at that of the growing army of people who are or would like to become professional birdwatchers. I once came across correspondence between George Waterston and James Fisher in the 1940s in which the first asked how he might raise support for ornithology in Scotland, and the second replied that personally he did not go around seeking support, but raised his own. I have also usually tried to do this (since it has fewer strings attached), and deprecate attempts to raise funds by 'crying "Wolf!"' over hypothetical emergencies, since it tends to discredit the real ones.

Dr W. R. P. Bourne
Department of Zoology, Aberdeen University, Tillydrone Avenue, Aberdeen AB24 2TZ

The commercialisation of ornithology and declining bird populations

Further to my letter regarding the age of survey workers (*Brit. Birds* 91: 330), I feel that I must pick up my pen again.

Has the passage of time caused Dr W. R. P. Bourne (*Brit. Birds* 92: 260-261; see also above) to forget that many birds which were common in his youth are much less abundant now, or does he believe that this does not matter so long as extinction is not imminent? Even if there is (and I have no reason to think that this is the case) an element of self-interest in the 'current stream of appeals from all our ornithological organisations', it is hugely outweighed, at least in my opinion, by the need to raise general awareness concerning habitat deterioration and declining bird populations.

I have no objection to Dr Bourne seeking to raise his own support, for that is what he appears to be doing. It would be infinitely preferable, however, if he did not do so at the expense of our excellent ornithological organisations and our all too frequently struggling bird populations.

Ian Moorhouse
Garden House, Cotherstone, Co. Durham DL12 9PQ

In reply to Dr W. R. P. Bourne's letter (*Brit. Birds* 92: 260-261), I should like to make the following points.

1. Dr Bourne takes no account of any time scale or any population trends. His same arguments could easily have been made about the Corn Crake *Crex crex* in the 1960s. Are we to wait until a species' imminent extinction before acting?
2. Birds are just one indicator of a whole ecosystem in a state of disrepair. What about invertebrates and plants?
3. British birds are also simply indicators of environmental changes taking place throughout Europe, as well as globally. (The disastrous effects of DDT are still continuing in India and elsewhere, although this fact seems to attract little comment.) Are we to sit back and watch declines of farmland birds just because, at this moment in time, they seem to be OK elsewhere, when 'elsewhere' is just a little farther behind in the same agricultural practices?
4. Only the most adaptable and least specialised species are 'gaining' and 'well able to take care of themselves'. Our most aggressive raptor was not able to take care of itself in the 1960s, and I am not aware of any 'Lapwing society for the protection of farmland birds'.
5. It is not, of course, surprising 'that some bird populations fluctuate with such factors as the climate and human use of the land'. The question is whether we, as responsible citizens, want these changes. Do we wish to live in agricultural factories where Northern Lapwings *Vanellus vanellus* have to be twitched? Dr Bourne seems to assume that we have no say in the state of our world, but I should like to ask who had the say in making such a mess in the first place.
6. It was because it contained an extensive, intelligent and pertinent list of references to highly qualified authors that the response by the Director of the BTO amounted to almost two pages.
7. It is quite beyond the means of almost any individual to be able personally to raise the kind of money that the RSPB and others are using to help, for example, farmland birds. Ironically, here in Denmark, it is the taxpayer who is having to fund such projects as the 'repairing' of the River Skjern, after the same taxpayers had paid for the straightening and drainage of the river in the 1960s.

Presumably, according to Dr Bourne, the only species needing help (without our appearing to be 'crying "Wolf!"') is the Corn Crake, which alone would cost a fortune to protect and which is a perfect example of a bird pushed to near-extinction by changes in agricultural practice. The Corn Crake, however, just happens to be the first in the race. How does Dr Bourne know that a similar fate does not await other farmland birds? Moreover, if their decline is assumed to level out at some time, at what level is it considered acceptable, and on what time scale? What is the method of controlling the decline if it does not proceed as expected, and who is going to be accountable for all this?

I am not a conservationist seeking a job, but a citizen of planet Earth who is extremely concerned with the hash we are making of it. Dr Bourne's attitude merely gives ammunition to the policy-makers, who profit by the illusion being given that everything is perfectly alright.

I wonder if some of Dr Bourne's generation have a problem admitting to some of the grave errors made not only in agriculture but also in forestry and fisheries. The devastation of our countryside has been either passively or actively supported by scientists who thought nothing of, for example, hedge removal, river-straightening, and the mass use of chemicals and the resultant pollution. Certainly, no-one at my university raised a finger.

Anand Prasad
Nymindegab Ecological Campsite, Lyngtoflen 12, Nymindegab, near Nebel 6830, Denmark

News and comment

Compiled by Bob Scott and Wendy Dickson

Opinions expressed in this feature are not necessarily those of *British Birds*

Young Birder of the Year 2001

We are delighted to report that the Young Ornithologists of the Year competition, previously supported by *British Birds*, will be taken forward in a new format. 'Young Birder of the Year' will be organised by the Royal Society for the Protection of Birds (RSPB) and the British Trust for Ornithology (BTO), and supported by *Bird Watching* magazine.

'Young Birder of the Year' is all about showing your enthusiasm for watching birds. You do not need to be an expert birdwatcher, and you do not need to visit exotic nature reserves in order to to take part. You can watch birds locally, even in your back garden, and you have until the end of October to do this. The following is a summary of the rules of the new competition.

In order to qualify, contestents are required to submit ONE of the following:

1) A field notebook. The notebook should cover at least ten birdwatching outings. It should include details of where you went, when, and what you saw. Most importantly, make a note of any interesting bird behaviour, and try to include some sketches, too – it does not matter if you cannot draw very well.
2) A bird project, which might be about one bird species, a group of birds (e.g. ducks or birds of prey), or a place where you like to watch birds. The important thing is to make sure that the project includes lots of information about your own observations, not just those that you might have read about.
3) An essay, which might cover any topic concerning wild birds or birdwatching.

The three age categories for judging are under 10 years, 10-13 years, and 14-18 years. Entries should be submitted to Young Birder of the Year 2001, RSPB Youth Unit, The Lodge, Sandy, Bedfordshire SG19 2DL, by Friday 2nd November 2001.

We wish the new competition every success, and hope that it succeeds in fostering the enthusiasm of a new generation of birdwatchers.

The Eric Hosking Trust

The aim of the Eric Hosking Trust is to sponsor ornithological research through the media of writing, photography, painting or illustration. In 2000, the Trust awarded two bursaries. The first was given to Mark Bolton, to aid the purchase of equipment necessary for remote monitoring of nest attendance by Madeira Petrels *Oceanodroma castro*, Bulwer's Petrels *Bulweria bulwerii*, Cory's Shearwaters *Calonectris diomedea*, Manx Shearwaters *Puffinus puffinus* and Little Shearwaters *P. assimilis* in the Azores. The second was awarded to Juan Brown, warden of Skomer Island, Dyfed, to help him present a paper on Manx Shearwaters to a conference in Madeira. The Trust is now seeking applications for up to £500 for the 2001 bursary. The closing date for applications is 30th September 2001, and details are available from the Eric Hosking Charitable Trust, Pages Green House, Wetheringsett, Stowmarket, Suffolk IP14 5QA; tel: 01728 861113.

Two new information services for birdwatchers

For several years, *BirdGuides Ltd* has provided a bird information service on the Internet, supplying birdwatchers with news of rare birds in Britain, often within minutes of their discovery. From early April, the service has been enhanced to provide more information, including maps showing how to find the birds, and any comments or hints from birders who have seen them. 'Bird News Extra' also gives access to previous sightings, so that you can, for example, look up all those reported in Norfolk in the preceding week, or review all the reports of Bohemian Waxwings *Bombycilla garrulus* last winter.

For those who prefer to receive the information by e-mail, *BirdGuides* is providing another new facility, 'Email Alert'. This allows birdwatchers to choose the species they want to hear about, and also the counties or regions in which they are interested. An e-mail will then be despatched as soon as a bird is reported that fits the stated search criteria. To support these services, *BirdGuides* employs a team of experienced and knowledgeable birdwatchers to input the news for both the website and the e-mails. Information may be submitted via a freephone sightings line (08000 350 444), through the website, or by e-mail (sightings@birdguides.com).

BirdGuides is offering 'Bird News Extra' at an introductory price of just £10 per year, and both services, including 'Email Alert', for £20 per year. Anyone will be able to try out these new services free of charge for 14 days by logging on to www.birdguides.com/birdnews

75 years at Cley

In 1926, Dr Sydney Long organised an appeal to raise the funds to buy Cley Marshes, in Norfolk. The Norfolk Naturalists' Trust (now the Norfolk Wildlife Trust) was established later that year with the purpose of managing Cley Marsh 'as a bird-breeding sanctuary for all time'. The Norfolk Wildlife Trust (NWT), now in its 75th year, is the oldest of the country's 46 Wildlife Trusts. NWT owns and/or manages substantial areas of the Norfolk coastline, as well as nine of the Norfolk Broads and five ancient woodlands. Regular Norfolk birdwatchers will be familiar with many other NWT reserves in addition to Cley, such as Hickling and Weeting. Cley Marshes, however, continue to make headline news. Recent inundations by salt water are threatening to destroy the freshwater marsh and reedbeds permanently, and as a result the construction of new flood defences is scheduled to commence in 2001. This project is of particular interest as the first Environment Agency flood-defence scheme to be carried out purely for wildlife-conservation reasons. The Norfolk Wildlife Trust can be contacted at 72 Cathedral Close, Norwich NR1 4DF; e-mail: admin@nwt.cix.co.uk

Cranes in France

In Aquitaine, records have again been broken this past winter, with 13,000 Common Cranes *Grus grus* wintering at Captieux, in Les Landes, in addition to 35,000 at nearby Arjuzanx, double the numbers counted during the previous winter. The high numbers are possibly linked to the mild conditions during the 2000/01 winter, as well as the currently healthy state of the species' population in western Europe. (*Contributed by Ken Hall*)

Butterbump no. 6

Each year, the RSPB produces a newsletter devoted to the state of the UK's Great Bittern *Botaurus stellaris* population (a local name for Great Bittern in some parts of eastern England is 'Butterbump'). There are signs of a recovery from the all-time low of just 11 booming males in 1997, with up to 28 recorded in 2000. Considerable resources have been devoted to arresting the Great Bittern's decline in recent years, and the results are slowly becoming apparent, with some exciting new reedbeds being developed. Old nesting sites, for example North Warren, Suffolk, have been revitalised and now hold breeding bitterns again. Existing sites, such as Leighton Moss, Lancashire, are being extended, while brand-new sites are being constructed, too, for instance at Lakenheath, Suffolk. For further details of bitterns and *Butterbump*, contact RSPB, East Anglia Office, Stalham House, 65 Thorpe Road, Norwich NR1 1UD.

From consultation of Francesa Greenoak's book *British Birds: their folklore, names and literature*, to see just where the name 'Butterbump' originates (from Yorkshire, apparently), it is quite evident just how widespread the Great Bittern must have been in the past. Bird species that acquire local or regional names tend to have been very well known at some time, and there are plenty of such names for the Great Bittern. These include 'Bog Bumper' and 'Blutter' in Scotland, 'Bumpy Cors' and 'Boom Bird' in Wales, 'Bog Drum' in Ireland, 'Bittour' and 'Bull of the Mire' in Northumberland, 'Bitterurne' in Surrey and 'Clabitter' in Cornwall. Plenty of scope for the RSPB's recovery programme then...

BOC ibis changes its appearance

The *Bulletin of the British Ornithologists' Club* has not changed its appearance for many years. The bulletin, with its flimsy blue cover portraying a standing Sacred Ibis *Threskiornis aethiopicus*, has hosted international papers on taxonomy and distribution for some 50 years. This year, there have been some significant changes in its appearance, but the quality of the contents remains the same. The standing ibis on the new, glossy cover has now stretched its wings and acquired two flying siblings. The contents of vol. 121, no. 1, include details of a new species of laughingthrush (the Chestnut-eared *Garrulax koukakinbensis* from Vietnam), new observations from Paraguay and Venezuela, details of rare and extinct birds in the University of Sydney's Museum, and details of extinction, myths and colour morphs of boobies *Sula* at colonies in the Indian Ocean. Further details are available from the Hon. Secretary, Dene Cottage, West Harting, Petersfield, Hampshire GU31 5PA, or from the BOC website (www.boc-online.org).

Flamingos in the Camargue

A record total of more than 20,000 pairs of Greater Flamingos *Phoenicopterus* ruber nested at the Etang du Fangassier in 2000. Some 14,500 young were fledged. That they are doing so well is due, in no small part, to the protection which they are receiving from LPO-PACA (Provence-Alpes-Côte d'Azur) in conjunction with the Parc naturel régional de Camargue, the WWF (Worldwide Fund for Nature), and the Compagnie des Salins du Midi. Volunteers are always needed to help man the watchpoint, and to provide the public with information about the birds and their conservation. French-speaking birdwatchers who wish to help should contact Laurent Zimmermann, tel: +33 4 90 97 08 43.

EOU explores the Avian Calendar

The third conference of the European Ornithologists' Union is to be held at Groningen, The Netherlands, on 22nd-26th August 2001. The theme of the conference is 'The Avian Calendar: exploring biological hurdles in the annual cycle', and key speakers will include John Croxall (tracking migrating albatrosses Diomedeidae), Jan van der Winden (Black Tern *Chlidonias niger*), Allan Baker (migration and DNA) and John Rappole (migration systems in the Old and New Worlds). Full details of the conference may be found on the EOU website: www.nou.nu

Birdwatchers wanted at migration watchpoints in Spain...

The Strait of Gibraltar is the most important flyway across the Mediterranean for large migratory birds breeding in central and western Europe. Hundreds of thousands of birds cross the Strait each year, to and from African wintering quarters. In 2001, the Regional Government of Andalucia is again funding *Migres*, a scheme to monitor the autumn migration of soaring birds. This will, it is hoped, be the first stage in a long-term programme of monitoring migration through the Strait of Gibraltar. The fieldwork is co-ordinated by Sociedad Española de Ornitologia, the Spanish partner of BirdLife International.

Volunteer birdwatchers with an aptitude for 'vis mig' are needed at a number of observation points on the Spanish mainland this year, from mid July to mid October. A minimum stay of 14 days is required by the organisers, and, in return for a registration fee (8,000 Pts), full board and accommodation are provided, together with transport within Spain. For more details, contact Programa Migres, Centro de Visitantes 'Huerta Grande', Ctra. N-340 El Pelayo, 11390 Algeciras, Spain; e-mail: P.MIGRES@TELELINE.ES

...and in Israel

In a similar vein, experienced observers are required to participate in the Autumn Migration Survey of soaring birds in Israel. Organised by the Israel Ornithological Center, another partner of BirdLife International, this annual event has attracted birdwatchers from around the world to count and identify the hundreds of thousands of pelicans *Pelecanus*, storks *Ciconia* and raptors that migrate over Israel between July and October. The IOC will provide board and lodging for participants staying a minimum of four weeks. For more information, contact the IOC, Atidim Industrial Park, PO Box 58020, Tel-Aviv 68101, Israel; e-mail: ioc@netvision.net.il

Correction

Reports of the passing of one of this country's leading conservationists, Bert Axell, were wildly exaggerated in these pages last month (*Brit. Birds* 94: 210). We are reliably informed that, although in hospital, Bert is very much still with us. Bert Axell played a major role in the formative years of both Dungeness Bird Observatory and Minsmere RSPB Reserve, and the creativity of his conservation work in Suffolk became a model which others have copied around the world. We are sure that all *BB*-readers will want to join us in wishing bert a complete, and speedy, recovery, and we apologise for any distress that this mistake may have caused. ***Eds***.

Organbidexka

The February newsletter from Organbidexka Col Libre (OCL) has a summary of the autumn 2000 migration at this pass in the western Pyrenees. The totals counted from July to November were impressive: 10,676 European Honey-buzzards *Pernis apivorus*, 11,197 Black Kites *Milvus migrans*, 3,107 Red Kites *M. milvus*, 270 Marsh Harriers *Circus aeruginosus*, 250 Eurasian Sparrowhawks *Accipiter nisus*, plus a variety of other birds of prey, including a single Eleonora's Falcon *Falco eleonorae*. Non-raptors, such as 1,102 Great Cormorants *Phalacrocorax carbo*, 374 Black Storks *Ciconia nigra* and 297 White Storks *C. ciconia*, also featured prominently in the totals. Common Crane *Grus grus* numbers were fairly low last year, probably because mild weather meant that their migration to Spain took place after the main observation period.

The same newsletter has an interesting summary of the migration patterns of the Hobby *Falco subbuteo* across the Pyrenees since 1980. It is encouraging to see that, although numbers fluctuate wildly from year to year (up to a maximum of 90 individuals per year), the overall trend during the past 20 years has been upwards, in line with population trends in Britain and other parts of western Europe. The Hobby's migration period is an extended one, from mid July to the end of October, peaking around 24th September. This falls neatly between the peak dates at Falsterbo, Sweden (13th September), and at Gibraltar (11th October). For more details of the work of OCL, contact: ocl@wanadoo.fr

Recent BBRC decisions

This regular listing of the most recent decisions by the British Birds Rarities Committee is not intended to be comprehensive or in any way to replace the annual 'Report on rare birds in Great Britain'. The records listed are mostly those of the rarest species, or those of special interest for other reasons. All records refer to 2000 unless stated otherwise.

Accepted: **Pied-billed Grebe** *Podilymbus podiceps* West Tanfield (North Yorkshire), 6th-21st April. **Franklin's Gull** *Larus pipixcan* Clennon Valley, Paignton (Devon), 16th-19th December. **Forster's Tern** *Sterna forsteri* Bangor (Caernarfonshire), 2nd-10th December. **Calandra Lark** *Melanocorypha calandra* Fair Isle (Shetland), 13th May. **Isabelline Wheatear** *Oenanthe isabellina* Blakeney Point (Norfolk), 1st October. **Desert Wheatear** *Oenanthe deserti* Boulby Cliffs (Cleveland), 12th-14th November. **Booted Warbler** *Hippolais caligata* of the race *rama* Portland Bill (Dorset), 1st July. **Spectacled Warbler** *Sylvia conspicillata* Tresco (Scilly), 15th-21st October. **Isabelline Shrike** *Lanius isabellinus* Whitley Bay (Northumberland), 9th November. **Spanish Sparrow** *Passer hispaniolensis* Cawsand (Cornwall), 12th November. **Red-eyed Vireo** *Vireo olivaceus* Porthgwarra (Cornwall), 27th-30th September; St Mary's (Scilly), 28th September, another, 5th-12th October; Tresco (Scilly), 1st October; Lundy (Devon), 8th-12th October.

M. J. Rogers, Secretary, BBRC, 2 Churchtown Cottages, Towednack, St Ives, Cornwall TR26 3AZ

The British Birds Rarities Committee is sponsored by Carl Zeiss Ltd.

Looking back



Seventy-five years ago:

'BREEDING OF THE ICTERINE WARBLER IN ENGLAND. At the February meeting of the British Ornithologists' Club I exhibited a clutch of three eggs of the Icterine Warbler (*Hippolais icterina*) taken by myself at Mildenhall, near Marlborough, Wiltshire, on May 8th, 1907 (*Bull. B.O.C.*, XLVI., p. 74). The nest was actually found on May 3rd, when the female was flushed off two eggs. It was in an alder, about four feet from the ground at the junction of several branches which formed a sort of cup, and was composed of moss and wool, with one or two scraps of birch bark on the outside as well as what appeared to be a piece of dirty yellowish paper. Owing to school restrictions I was not able to revisit the site till two days later, when T. C. K. Moore accompanied me in order to photograph the nest. There were then three eggs, and the hen flew off as before, but kept skulking within a few yards. Next day we went out again with the camera, but had considerable difficulty owing to the undergrowth and an inadequate tripod. Two days later the eggs were cold and no bird visible, and three days later it was evident that the nest was deserted.

'We spent a good deal of time hunting for a second nest, but without success. The nest was subsequently presented to the College Museum. Although on two or three previous occasions the eggs of some species of *Hippolais* have been found in England, they have all been ascribed on the evidence of the eggs to *H. polyglotta*.' (*Brit. Birds* 19: 311, May 1926)

Fifty years ago:

'WOOD-LARK BREEDING IN MIDDLESEX.—Major G. K. McCulloch has sent a detailed report of the breeding of a pair of Wood-Larks (*Lullula arborea*) at a locality in Middlesex in 1950. In July a party of eight birds was seen, six being juveniles, probably of two broods. Other recent records of Wood-Larks breeding in Middlesex are given in *The London Bird Report* (1948, p. 8; 1949, p. 12), and it is clear that this is another area where the species is extending its range, as in Essex [*Brit. Birds* 40: 275] and Yorkshire [44: 19].

'WOOD-LARK NESTING IN GROWING CORN.—With reference to the record [*Brit. Birds* 40: 116] of Wood-Larks (*Lullula arborea*) nesting in growing corn, Mr C. F. Brown sends an account of a further case which he noted in West Sussex on June 5th, 1950. The nest, which contained four young, was in a field of young barley about 18 inches high. More suitable and typical terrain was available close to the barley field.' (*Brit. Birds* 40: 180, May 1951)

Monthly Marathon



Olaf Jesson

142. Little Tern *Sterna albifrons*, Spain.

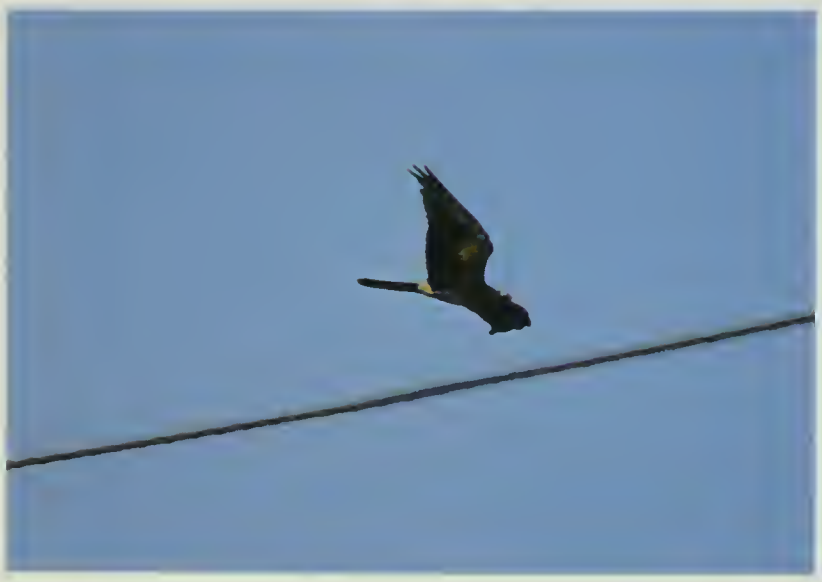
Although we are presented with a relatively good photograph, the identification of the bird in plate 64 (repeated here as plate 142) is far from straightforward. Clearly, we are dealing with a tern *Sterna/Chlidonias* and, from the dark bars along the scapulars, the markings on the mantle, and the head pattern, it is in juvenile plumage. The biggest problem with juvenile terns is the degree of plumage variation, and this alone makes our task far from easy. First, however, we have to decide to which group this individual belongs. With any lone bird, it is hard to get an accurate impression of size, but we can with some confidence rule out the very large terns, and I suspect that most birdwatchers would realise that we are dealing here with either a marsh tern *Chlidonias* or one of the small or medium-sized *Sterna* species.

Juvenile marsh terns all have a variable, but well-marked, head pattern, with a notch of black extending down behind the eye and a corresponding white area on the side of the neck. They also have a shortish bill and tend to show a relatively dark mantle. None of these features is present on our bird, and so marsh terns can be eliminated from the list of possibilities.

Of the *Sterna* terns, we have to consider Roseate *S. dougallii*, Common *S. hirundo*, Arctic *S. paradisaea*, White-cheeked *S. repressa*, Little *S. albifrons*, and the two close relatives of Little Tern—Least *S. antillarum* and Saunders's Terns *S. saundersi*. Arctic Tern can safely be ruled out by the long legs of the mystery bird, and Roseate by the lack of both distinctive scaly upperparts and dark legs. What of Common and White-cheeked Terns, and the smaller species? This is where things become tricky, since there is considerable variation in the juvenile plumage of all these species. The developing head pattern suggests an eventual dark cap narrowing to a point, leaving a white forehead running into a clear white area above the eye. This points towards one of the Little Tern group, but both Common and White-cheeked could conceivably show such a pattern in juvenile plumage.

Examining the bird's structure, its very long wings and comparatively short tail are clearly apparent. The well-spaced primaries appear to be complete and not in moult. Since the tail and primaries grow simultaneously, we can assume that the short tail, with an obvious white outer edge, is also complete. These features of a very short, white-edged tail and long wings confirm that we are looking at one of the three species of small tern: Little, Least or Saunders's. We should expect to see a longer tail, with perhaps not such a clear white edge, on any of the other contenders.

This is, indeed, a Little Tern. It



143. 'Monthly Marathon'. Photo no. 178. Twenty-sixth stage in eleventh 'Marathon'. Identify the species. Read the rules (see page 55), then send in your answer *on a postcard* to Monthly Marathon, c/o The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY, *or by e-mail* to editor@britishbirds.co.uk, *to arrive by 29th June 2001.*

was photographed in Spain by Olaf Lessow. Saunders's Tern, which has been recorded in the Western Palearctic as a vagrant in the Red Sea area, is extremely similar to Little Tern, perhaps identical in all plumages other than adult breeding. Separation of the two is therefore extremely difficult, but one feature in which breeding-plumaged adults differ is the colour of the shafts of the outer primaries, these being dark on Saunders's. It is unclear whether this difference is valid in juvenile plumage, but certainly the shafts of the outer primaries on our bird are white.

Least Tern has not been formally accepted on to the Western Palearctic List, although a small tern showing characters of this species appeared at Rye Harbour, East Sussex, during the breeding season in each of the years from 1983 to 1992. What may have been the same bird was also seen at West Wittering, East Sussex, and at Colne Point, Essex, in 1991. Juveniles of the two species are very similar, but juvenile Least Tern shows a more contrasting plumage pattern, with a broader, darker carpal bar extending around the bend of the wing, always conspicuous on a standing individual. As with Little Tern, the head pattern is quite variable, and the bill is frequently entirely black (Chandler & Wilds 1994).

Nearly all of the leading contenders identified this Little Tern correctly – but not quite all. Agonisingly, Christer Kalenius, our leader for almost a year, opted for Common Tern rather than Little Tern, and so drops out at the eleventh hour. Our commiserations go to the flying Finn for a superb effort, but his slip-up means that we now have four leading contenders, all with a sequence of 11-in-a-row, namely Peter Lansdown, Andy Mears, Jakob Sunesen and Peter Sunesen. One step behind is Jon Holt, who now has ten correct answers to his name. In fact, the majority of entrants were right once again this time, with 70% naming the species correctly. As suggested above, the most frequent alternatives were Common Tern (11%) and White-cheeked Tern (7%), while we were somewhat relieved to discover that no entrants had identified it as a Saunders's Tern. A minimum sequence of 13-in-a-row, and a clear leader, is required to win the prize in the present competition.

In order to help the editorial team to catch up on their production schedule, and to allow our overseas contestants a little more time to deliberate their answers, there will be no Monthly Marathon in the next issue; the answer to plate 109 in April's *BB* will, therefore, be revealed in the July issue. Answers to the identification challenge set in plate 143 should be received by 29th June.

Steve Rooke

Reference

Chandler, R. J., & Wilds, C. 1994. Little, Least and Saunders's Terns. *Brit. Birds* 87: 60-67.

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Recent reports

Compiled by Barry Nightingale and Anthony McGeehan

This summary of unchecked reports covers the period mid April to early May 2001.

White-billed Diver *Gavia adamsii* North Ronaldsay (Orkney), 25th-30th April. **Black-browed Albatross** *Diomedea melanophris* Dungeness (Kent), 4th May. **Northern Gannet** *Morus bassanus* Coastal movement on 21st April included 1,200 past Dungeness, and 873 past Lowestoft (Suffolk) in two-and-a-half-hours. **Night Heron** *Nycticorax nycticorax* Goonhilly (Cornwall), 29th April. **Purple Heron** *Ardea purpurea* Dungeness, 13th April; Marazion Marsh (Cornwall), 22nd April; Minsmere RSPB Reserve (Suffolk), 29th April to 3rd May; Calf of Man (Isle of Man), 1st May. **Red-breasted Goose** *Branta ruficollis* Snettisham (Norfolk), 30th April. **Lesser Scaup** *Aythya affinis* Redesmere (Cheshire), at least 16th-24th April. **Kentish Plover** *Charadrius alexandrinus* Angle Bay (Pembrokeshire), 13th April; Camber Sands (East Sussex), 22nd April; Breydon Water (Norfolk), 25th April. **Bonaparte's Gull** *Larus philadelphia* South Uist (Western Isles), 7th-8th May. **Caspian Tern** *Sterna caspia* Winterton (Norfolk), 25th April. **Snowy Owl** *Nyctea scandiaca* Bardsey (Gwynedd), 13th April. **Short-toed Lark** *Calandrella brachydactyla* Landguard (Suffolk), 8th May. **Red-rumped Swallow** *Hirundo daurica* Near Droitwich (Worcestershire), 17th April; St Mary's (Scilly), 1st-2nd May. **Richard's Pipit** *Anthus novaeseelandiae* Holland Haven (Essex), 15th April; Blakeney Point (Norfolk), 26th April; Weybourne (Norfolk), 30th April.



Gary Bellingham

144. Lesser Scaup *Aythya affinis*, Redesmere, Cheshire, April 2001.



Steve Young/Birdwatch

145. Little Gulls *Larus minutus*, Seaforth, Merseyside, April 2001. Record numbers of Little Gulls were recorded in Merseyside this spring. An estimated 750 were logged on 14th April, the majority of these on the River Mersey; peak passage was a little later in the month, however, when a co-ordinated and accurate count between Crosby Marina and Seaforth revealed an amazing 819 individuals.



Steve Young/Birdwatch

146. Yellow Wagtail *Motacilla flava* of the blue-headed race *flava*, Seaforth, Merseyside, April 2001.

Olive-backed Pipit *Anthus hodgsoni* Skomer (Pembrokeshire), 24th April; Fair Isle (Shetland), 6th May. **Red-throated Pipit** *Anthus cervinus* St Martin's (Scilly), 14th-17th April. **Dark-throated Thrush** *Turdus ruficollis* One of the black-throated race *atrogularis* Fair Isle, 14th-15th April. **Subalpine Warbler** *Sylvia cantillans* Portland (Dorset), 12th-14th April; Kilnsea and Spurn (East Yorkshire), 26th-29th April and 3rd May; Kynance Cove (Cornwall), 7th May. **Iberian Chiffchaff** *Phylloscopus brehmii* Dungeness, 15th-17th April; Bardsey, 2nd May. **Collared Flycatcher** *Ficedula albicollis* Bardsey, 5th May. **European Serin** *Serinus serinus* Selsey Bill (West Sussex), 16th, 21st, 25th and 27th April, 3rd and 7th May; Rye Harbour (East Sussex), 17th April; Portland, 18th April to 2nd May; West Runton (Norfolk), 22nd April; Landguard, 27th April. **Pine Bunting** *Emberiza leucocephalos* Bardsey, 30th April. **Little Bunting** *Emberiza pusilla* Calf of Man, 28th April; Lewis (Western Isles), 2nd May.



Dave Nye

147. Penduline Tit *Remiz pendulinus*, Weybourne, Norfolk, April 2001.

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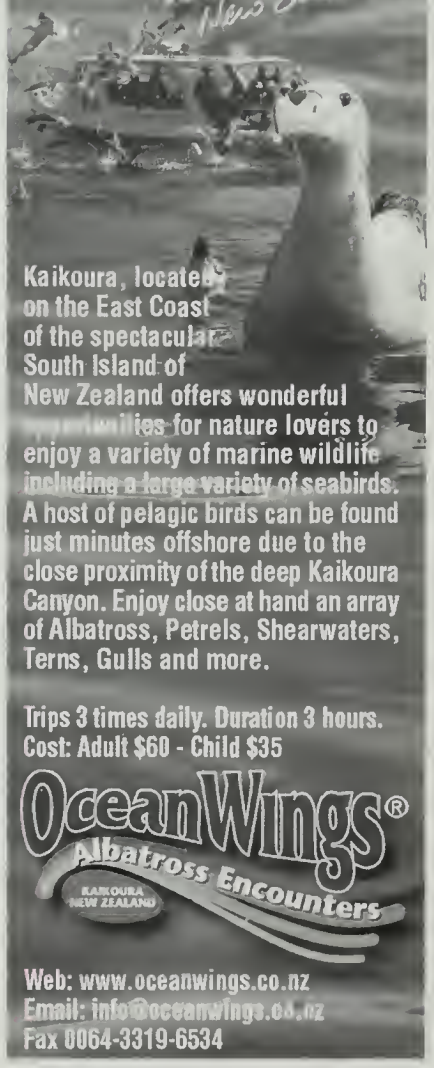
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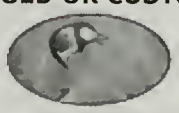
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ISSN 0007-0335

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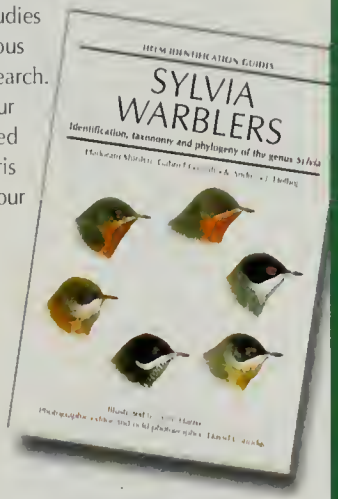
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The taxonomic status of Lesser Redpoll

Alan G. Knox, Andreas J. Helbig, David T. Parkin and George Sangster[1]



Alan Harris

ABSTRACT Lesser Redpoll *Carduelis cabaret* has until recently been widely regarded as a subspecies of Common Redpoll *C. flammea*. In the past, it was geographically isolated from other redpolls during the breeding season, but expansion of its range since the 1950s has brought it closer to nesting Common Redpolls in southern Scandinavia. In 1994, breeding occurred sympatrically without mixed pairs being noted. Lesser Redpoll is diagnosably distinct from all other redpolls, and there are preliminary reports of vocal, molecular and behavioural differences. It is recommended that Lesser Redpoll is best treated as a separate species.

Many of the taxa which we currently regard as subspecies were considered to be full species in the nineteenth century, before the concept of polytypic species became widespread. The Lesser Redpoll *Carduelis cabaret* (hereafter referred to as *cabaret*), which has until recently been widely treated as a race of Common Redpoll *C. flammea*, is one such example. With new data, re-examination of existing information, and changes in the understanding and application of species concepts, it is now increasingly recognised that a number of these subspecies would be more appropriately treated once again as full species.

The breeding range of *cabaret* encompasses Britain & Ireland and countries bordering the North Sea from France to southern Norway, and central Europe (Hagemeijer & Blair 1997; fig 1).

Populations from these areas winter in

1. *On behalf of the Association of European Rarities Committees and the British Ornithologists' Union Records Committee*

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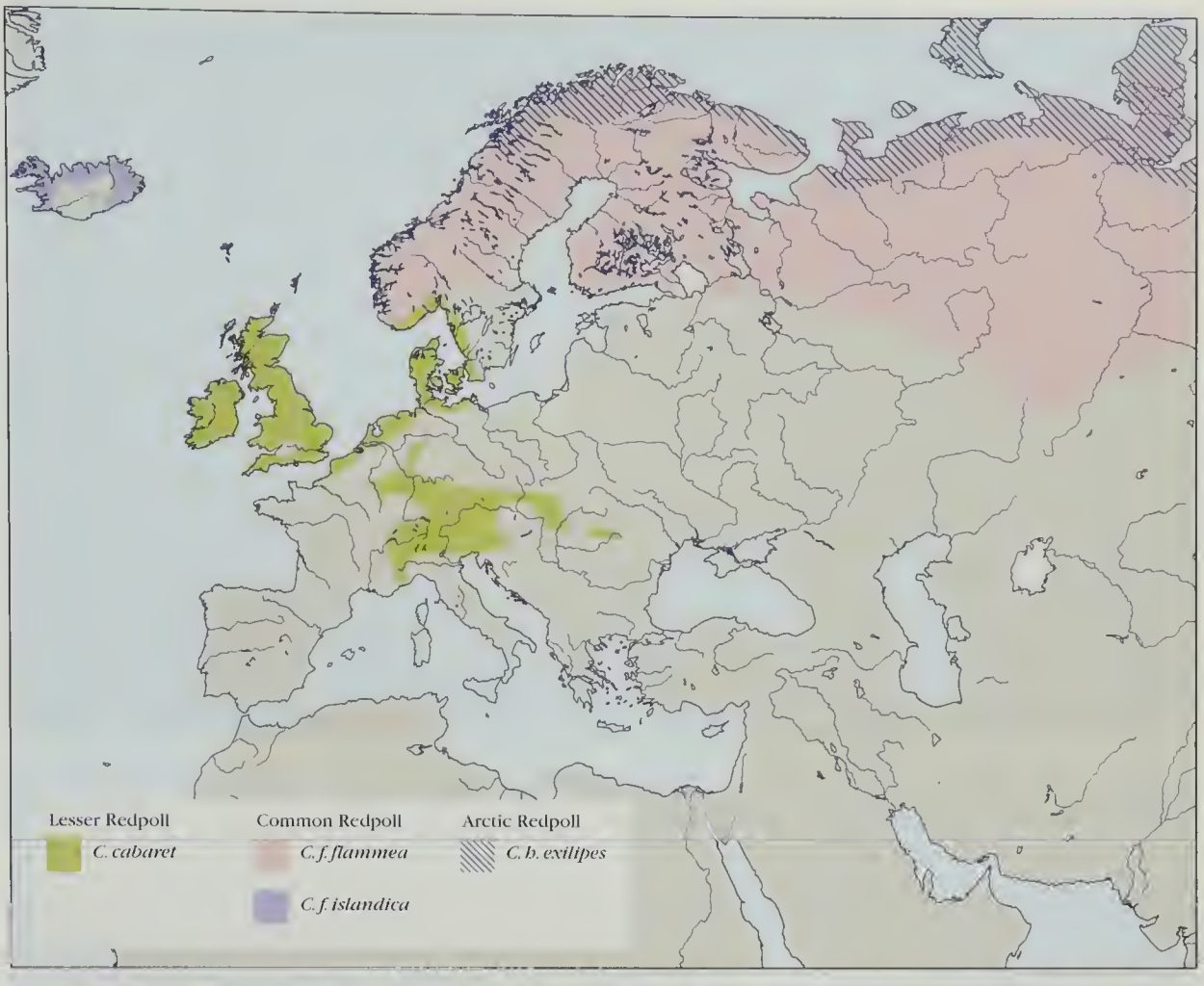


Fig. 1. Breeding ranges in Europe of Lesser *Carduelis cabaret*, Common *C. flammea* and Arctic Redpolls *C. hornemanni*. Modified from Riddington *et al.* (2000).

Britain and continental Europe, south to the Alps. Redpolls were also introduced into New Zealand, and have since colonised nearby islands. The large population there was previously considered, on the basis of appearance, to consist of both *cabaret* and 'Mealy Redpolls' *C. f. flammea* (hereafter referred to as *flammea*), which were said to be interbreeding. Fennell *et al.* (1985) showed that, in fact, phenotypic variation differed little from that of British *cabaret*, apart from the frequent occurrence of whiter wing-bars. They suggested that this may have been due to founder effects.

Apart from the enigmatic Icelandic redpolls of unknown affinities, *cabaret* was also, until recently, the only form isolated geographically from all other redpoll taxa during the breeding season (Knox 1988). Although its allopatric breeding distribution made it difficult to assess the status of the taxon under the Biological Species Concept, Knox (1988) noted the spread of *cabaret* towards the breeding range of *flammea* in southern Scandinavia, and commented that, should the two forms come together and fail to hybridise, *cabaret* would have to be treated as a separate species.

Differentiation

There are clear morphological differences between *cabaret* and *flammea*. With its small size and rich plumage tones, *cabaret* is the most distinctive of all the redpoll taxa, and the only form that is not liable to be confused with any other (Knox 1988; Herremans 1990). In Sweden, the most useful characters for distinguishing female and young male *cabaret* are their smaller size, the uniform brown colour on the back and nape, and the buff flanks and breast-sides which contrast with whitish underparts (Lindström *et al.* 1984). These morphological differences are complemented by differences in vocalisations (Herremans 1989) and, apparently, behaviour (Lifjeld & Bjerke 1996, see page 264). Herremans (1989)



J. Hollis/Windrush

148 & 149. Lesser Redpolls *Carduelis cabaret*, Kent, July 1989. The plumage of both of these birds, prior to the post-breeding moult, is heavily worn, particularly that of the individual below, on which the pale greater-covert wing-bar is almost completely worn away. As a result of feather wear, both look rather pale and bleached, the ground colour of the underparts being almost uniform whitish on the female; the upperparts of both, however, are rather uniform brown.



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described the flight-call 'chatter' of *cabaret* as being higher-pitched and less staccato than that of *flammea*, and lacking the latter's broad frequency span: 'tji tji tji' in *cabaret* and 'che che che' in *flammea*. There were also subtle, but detectable, differences in the 'dsooee' perching-calls. Glutz von Blotzheim & Bauer (1997) did not clearly distinguish between *flammea* and *cabaret* in their treatment of redpoll vocalisations. Although sonograms were presented in the account of *cabaret*, some are clearly from vocalisations



David Tipling/Windrush

150 & 151. Common Redpolls *Carduelis flammea* of race *flammea* ('Mealy Redpoll'), northern Finland, March 1999. In fresh plumage, prior to the breeding season, the clean, whitish flanks and generally 'frosty' appearance of Common Redpoll are quite different from those of Lesser Redpoll *C. cabaret*.



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of *flammea*, and potential differences between the taxa were not discussed.

There are also possible molecular differences between *cabaret* and all the other redpolls. A preliminary molecular study was made of the feather proteins of *flammea*, *rostrata*, *cabaret*, and the two forms of Arctic Redpoll *C. hornemanni* (nominate *hornemanni* and *exilipes*), as well as dark and pale redpolls from Iceland. This revealed little, if any, differentiation between any of the taxa examined, except for *cabaret*, which differed from all other taxa at three apparent band positions (Knox 1977). In other avian taxa, such differences occurred only between well-marked species (Knox 1980).

Geographical distribution

In Europe, the distribution of *cabaret* has changed dramatically over the last 150 years. In the mid-1800s, it was confined mainly to northern Britain, Ireland and the Alps, where it nested in semi-open woodland, particularly at higher altitudes. By 1910 it had increased in lowland Britain, but its range subsequently retracted rapidly, followed by another, more determined expansion from the 1950s onwards. From Britain, the distribution of *cabaret* soon crossed the North Sea to The Netherlands, Germany and Denmark. From the 1970s, *cabaret* was found in southern Sweden and Belgium, and was first discovered nesting in France in 1983. Concurrently with this expansion around the North Sea coasts, a similar increase was occurring in Central Europe. It first bred in the former Czechoslovakia in 1952, and now nests in a broad belt across the Alps and the Czech Republic. It has since spread northwards through central Germany to meet up with an inland population in the Ardennes, in Belgium (Knox *et al.* 1997; Ernst 1998). Although *cabaret* is still increasing in many areas, significant reductions have occurred recently in Britain, The Netherlands and Belgium (Knox *et al.* 1997).

During recent decades, *cabaret* has continued to increase and spread in southwest Sweden (e.g. Götmark 1978; Lindström *et al.* 1984; Ottvall & Råberg 1998) and southern Norway (e.g. Grimsby & Roer 1992). Generally, *flammea* breeds a little farther north in Scandinavia, in birch *Betula* and willow *Salix* scrub, and open forests of Norway Spruce *Picea abies*. As such, the breeding ranges of the two forms were initially quite separate. In years when there is an abundant seed crop, however, *flammea* is also an 'irruptive breeder' (Götmark 1982), and may nest well to the south of its normal breeding range.

In 1975, confirmed breeding of *cabaret* in Sweden was recorded for the first time, and this coincided with irruptive breeding by *flammea*. Even so, the two did not quite come together, since *cabaret* nested in coastal pine *Pinus* plantations and heaths, and *flammea* bred in inland spruce forests (Götmark 1978). The two forms were effectively isolated by habitat. Although the distributions of *cabaret* and *flammea* were close for many years in southern Norway (Grimsby & Roer 1992), no sympatry was reported until nearly 20 years later.

Sympatric breeding

Irruptive breeding finally brought *flammea* into contact with *cabaret* in southeast Norway in 1994 (Lifjeld & Bjerke 1996). The habitat was an area of mixed spruce and deciduous woodland on a former clear-fell surrounding a farm in Østfold county, where redpolls did not normally breed at all. An abundance of spruce seed early in 1994 attracted large numbers of Common Crossbills *Loxia curvirostra*, and led to extensive breeding by Siskins *C. spinus* and redpolls in the region. Of 11 redpoll nests found, six were of *cabaret* and five of *flammea*. Both members of each pair were seen and positively identified, and no mixed pairs were detected. With the appropriate permissions, some individuals were collected to confirm identification; the specimens have been deposited in the Zoological Museum, Oslo.

Both redpolls bred throughout the area studied, with nests of the two forms as little as 50 m apart. There was no apparent spatial segregation of the taxa, nor any apparent difference in the timing of their breeding. All the nests were in spruce, apart from one in Scots Pine *Pinus sylvestris*. Some differences were noted, although not quantified. The nests of *cabaret* were mostly well hidden in dense conifers, so that twigs had to be moved to see them, while those of *flammea* were usually visible from several metres away. Additionally, *cabaret* also tended to nest in denser stands of trees, whereas several *flammea* nests were in solitary spruces. There was also a marked difference in the behaviour of adults when disturbed at the nest: *flammea* would remain in the nest tree close to the observer, whereas *cabaret* would fly in circles several metres above the intruder's head.

Although sympatric breeding by *cabaret* and *flammea* has so far been reported in only one season, several pairs of both taxa were involved, in close proximity to each other, and seemingly without differences in the timing of their breeding (Lifjeld & Bjerke 1996). There is no evidence to suggest that pairing occurred before the birds arrived on the breeding grounds (see Knox & Lowther 2000).

The only recorded instance of attempted interbreeding between the two redpoll forms occurred in 1987, on Texel, The Netherlands. Following an invasion of *flammea* in the previous autumn, a female was found paired with a male *cabaret*, but the nest was subsequently destroyed (Dijksen 1989). The female was hundreds of kilometres from her normal breeding range. Such circumstances frequently lead to interspecific pairings as a result of a lack of conspecific mates, and these events are therefore not particularly significant as indicators of absence of reproductive isolation or specific distinctness.

Under Biological, Phylogenetic and Evolutionary Species Concepts, it would therefore seem that the Lesser Redpoll is best treated as a separate species, *Carduelis cabaret*.

Other redpoll taxa

The affinities of the pale and dark redpolls which breed in Iceland are uncertain. The (unnamed) pale birds resemble Arctic Redpoll of the race *exilipes*, while the dark individuals (*islandica*) are similar to 'Greater Redpoll' *C. f. rostrata* (Knox 1988; Herremans 1990). Leaving these two forms aside, the status of the remaining redpoll taxa is also controversial. Opinion varies between one and four species. The usual treatment (following Molau 1985 and Knox 1988) is to recognise two species:

Common Redpoll *C. flammea*, comprising
- 'Mealy Redpoll' *C. f. flammea* (circumpolar in low Arctic)
- 'Greater Redpoll' *C. f. rostrata* (Arctic: Canadian islands & Greenland)

Arctic Redpoll *C. hornemanni*, comprising
- 'Coues's Redpoll' *C. h. exilipes* (circumpolar in low Arctic)
- 'Hornemann's Redpoll' *C. h. hornemanni* (Arctic: Canadian islands & Greenland)



Roger Riddington

152. First-winter Lesser Redpoll *Carduelis cabaret*, Fair Isle, Shetland, September 1997. Compared with the adults in plates 148 & 149, this first-winter is much darker and more warmly coloured; the nape and mantle are uniformly dark, rich brown, while the flanks are strongly washed with buff.



Roger Riddington

153. First-winter Lesser Redpoll *Carduelis cabaret* (left) and first-winter Common Redpoll *Carduelis flammea* of race *rostrata/islandica* ('Greater Redpoll', right), Fair Isle, Shetland, October 1997. The difference in size between these two species is striking when they are photographed side by side.

The two races of each species are allopatric, although each is widely sympatric with one race of the other species. Thus, over considerable areas, *flammea* is sympatric with *exilipes* and *rostrata* is sympatric with *hornemanni*. The conventional treatment assumes the following relationships:

1. *flammea* and *rostrata* are each other's closest relatives, *rostrata* being larger, longer and darker than *flammea*.
2. *exilipes* is most closely related to *hornemanni*, which is larger, longer and paler than *exilipes*.

An alternative viewpoint might be that the morphological and plumage similarities are due to convergence. Therefore, *exilipes* might just be a pale relative of *flammea*, and *hornemanni* a pale relative of *rostrata* (Herremans 1990). Could the shared plumage characters of *exilipes* and *hornemanni* be due simply to their more northerly distribution and more terrestrial behaviour? Such reasoning would suggest that *flammea*, *exilipes*, *rostrata* and *hornemanni* would be best treated as four separate species (Herremans 1990). There is, however, a general tendency for the closest relatives of any taxon to be allopatric. This, and the plumage similarities, would suggest that the conventional treatment of the various species and races is more likely to be correct.

A study of Common, Arctic and Lesser Redpolls looked for genetic variation within and between the redpolls by comparing the patterns of mitochondrial DNA (mtDNA) fragments (the Restriction Fragment Length Polymorphism haplotypes) that are obtained when DNA from different individuals is cut with the same enzymes (Seutin *et al.* 1995). Seventeen haplotypes were found in 31 individuals examined. One haplotype occurred in all the taxa (14 individuals), and the others (almost all single-site differences) were represented in single individuals in all but one case (two individuals). The pattern of mtDNA divergence was unrelated to geographical or traditional taxonomic relationships, and the differences were slight compared with those between typical sister species (Seutin *et al.* 1995). Possible explanations for this lack of differentiation between the Common and Arctic Redpolls include the very large effective population sizes, the nomadic breeding systems and the recent divergence of the named taxa. Further molecular studies of this group are required.

In the meantime, it is recommended that the redpolls be treated as three species: Common Redpoll *C. flammea* (including *C. f. rostrata* and *C. f. islandica*), Arctic Redpoll *C. hornemanni* (including *C. h. exilipes*) and Lesser Redpoll *C. cabaret* (monotypic). These recommendations are made on behalf of the Association of European Rarities Committees and have been adopted by the British Ornithologists' Union Records Committee.



Tim Loseby

154. Common Redpoll *Carduelis flammea* of race *rostrata/islandica* ('Greater Redpoll'), Fair Isle, Shetland, September 1997.



Tim Loseby

155. Arctic Redpoll *Carduelis hornemanni*, Fair Isle, Shetland, September 1987.

Acknowledgments

We are grateful to members of the BOURC and its Taxonomic Sub-committee for comments.

References

Dijksen, L. J. 1989. Broedpoging van een gemengd paar van Kleine Barmsijs *Carduelis flammea cabaret* en Grote Barmsijs *C. f. flammea*. *Limosa* 62: 48.

Ernst, S. 1998. *Die Birkenzeisige*. Klingenthal.

Fennell, J. F. M., Sagar, P. M., & Fennell, J. S. 1985. Variation within the Redpolls of Canterbury. *Notornis* 32: 245-253.

Glutz von Blotzheim, U. N., & Bauer, K. M. 1997. *Handbuch der Vögel Mitteleuropas*. Vol. 14: 801-887. Wiesbaden.

Götmark, F. 1978. Gråsiskan *Carduelis flammea* – en expanderande häckfågel i sydvästra Sverige. *Vår Fågelvärld* 37: 133-135.

— 1982. Gråsiskans *Carduelis flammea* förekomst i södra Sverige under "sydhäckningsårct" 1975. *Vår Fågelvärld* 41: 315-322.

Grimsby, A., & Roer, J. E. 1992. Innvandringen av liten gråsisken *Carduelis flammea cabaret* til Norge 1962-1991. *Fauna norv. Ser. C, Cinclus* 15: 17-24.

Hagemeijer, W. J. M., & Blair, M. J. (eds.) 1997. *The EBCC Atlas of European Breeding Birds: their distribution and abundance*. London.

Herremans, M. 1989. Vocalizations of Common, Lesser and Arctic Redpolls. *Dutch Birding* 11: 9-15.

— 1990. Taxonomy and evolution in Redpolls *Carduelis flammea-hornemanni*; a multivariate study of their biometry. *Ardea* 78: 441-458.

Knox, A. G. 1977. Feather keratins, morphology and ecology in the taxonomy of crossbills and redpolls. PhD thesis, University of Aberdeen.

— 1980. Feather protein as a source of avian taxonomic information. *Comp. Biochem. Physiol. B.* 65: 45-54.

— 1988. The taxonomy of redpolls. *Ardea* 76: 1-26.

— & Lowther, P. E. 2000. Common Redpoll (*Carduelis flammea*). In Poole, A., & Gill, F. (eds.), *The Birds of North America*, No. 543. Philadelphia, PA.

— Nyström, B., & Nyström, H. 1997. *Carduelis flammea* Redpoll. In Hagemeijer, W. J. M., & Blair, M. J. (eds.), *The EBCC Atlas of European Breeding Birds: their distribution and abundance*. London.

Lifjeld, J. T., & Bjerke, B. A. 1996. Evidence for assortative pairing by the *cabaret* and *flammea* subspecies of the Common Redpoll *Carduelis flammea* in SE Norway. *Fauna norv. Ser. C, Cinclus* 19: 1-8.

Lindström, Å., Ottosson, U., & Pettersson, J. 1984. Sydlig gråsiska *Carduelis flammea* cabaret i Sverige samt förslag till kriterier för rasbestämning. *Vår Fågelvärld* 43: 525-530.

Molau, U. 1985. Gråsiskkomplexet i Sverige. *Vår Fågelvärld* 44: 5-20.

Ottvall, R., & Råberg, L. 1998. Den sydliga gråsiskans (*Carduelis flammea cabaret*) etablering i Skåne. *Anser* 37: 225-230.

Riddington, R., Votier, S. C., & Steele, J. 2000. The influx of redpolls into Western Europe, 1995/96. *Brit. Birds* 93: 59-67.

Seutin, G., Ratcliffe, L. M., & Boag, P. T. 1995. Mitochondrial DNA homogeneity in the phenotypically diverse redpoll finch complex (Aves: Carduelinae: *Carduelis flammea-hornemanni*). *Evolution* 49: 962-973.

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Difficulties in determining the age of Common Terns in the field

S. J. White and C. V. Kehoe



Howard Towell

ABSTRACT Large numbers of Common Terns *Sterna hirundo* of known age were studied during the breeding season at Seaforth Nature Reserve, Liverpool, Merseyside. Detailed observations of key plumage and bare-part features were recorded, and compared with published criteria for ageing terns. It was found that the majority of second-summer birds were in full breeding plumage and were therefore indistinguishable from adults; and that many first-summer birds exhibited some breeding-plumage features and were therefore confusable with some second-summers. A few second-summer birds were in non-breeding (winter) plumage and were therefore inseparable from similar first-summers. It is concluded that no individual Common Tern, except those first-summers which retain juvenile features, can be aged safely, and we propose that ageing terminology be amended to take this into account. Previous estimates that only about 1% of first-summer Common Terns return to the breeding grounds were confirmed, but, contrary to some previous studies, the majority of second-summers did so.

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The literature on Common Terns *Sterna hirundo* commonly states that the majority of immature birds remain in their winter quarters during the breeding season, and that most first- and second-summer individuals that do reach northern latitudes can be identified as such (e.g. Cramp 1985; Scott & Grant 1985).

Despite the early recognition of plumage variability among immature (post-juvenile) Common Terns, and of the existence of intermediates (Grant *et al.* 1985; Kaufman 1990), the notion that age-related plumages can be safely determined for terns, in the same way as they can for gulls (Laridae), has become commonplace among birdwatchers. Indeed, recent identification guides (e.g. Malling Olsen & Larsson 1995; Svensson *et al.* 1999) imply that most Common Terns, during the breeding season, can be assigned to one of three distinct plumage stages: 'first-summer' (referring to individuals in their second calendar-year), 'second-summer' (third calendar-year), or 'adult' (fourth calendar-year or older). Whereas gulls show a regular sequence of immature plumages before reaching adulthood, however, these supposed plumage stages of terns relate either to the presence of juvenile feathers or to the degree to which non-breeding-plumage features are retained during the breeding season.

First-summer terns are said to be characterised by the retention of juvenile remiges and rectrices, including the primaries (which can be distinguished by their very dark and worn appearance) and secondaries (which form a dark secondary-bar in flight); and also by non-breeding-plumage features, especially a complete white forehead, reduced depth of the dark cap, a dark bill, a dark carpal bar and white underparts. In short, they resemble what was formerly termed the '*portlandica*' plumage (Scott & Grant 1985; Grant *et al.* 1985).

Second-summer terns are said to look more like adults, but to be frequently distinguishable by one or more of a range of non-breeding-plumage features: a variable amount of white on the forehead, a darker bill, patchy grey-and-white underparts, and darker outer primaries. They are said typically to be intermediate between first-summers and adults.

Our study demonstrates that such a categorisation is oversimplified. Clear-cut, age-related plumages do not exist for Common Terns during the breeding season, and the overlap in appearance between different age categories is so large that only a very small minority of individuals can safely be aged in the field.

Methods

Between 1994 and 2000, detailed observations of Common Terns of known age were carried out at Seaforth Nature Reserve, Liverpool, Merseyside. The terns were aged by reading their metal-ring numbers in the field; only those ringed as chicks or juveniles, and therefore of known age, were included in the analyses. These observations made it possible to test the accuracy of previous assumptions about the appearance of different age classes of Common Terns, and the feasibility of distinguishing these accurately in the field.

On the first observation date, the following data were collected for each individual:

- *The amount of white on the forehead.* This was scored from 1 to 4, as follows:
1. no white feathers
2. variable amounts of white flecking
3. solid white patch
4. non-breeding-plumage pattern, with solid white forehead and reduced cap size, often indicated by the presence of a dark 'lobe' on the ear-coverts

- *The amount of black on the bill.* This was scored from 1 to 4, as follows:
1. wholly orange-red bill
2. the 'normal' dark-tipped pattern of adult breeding plumage
3. largely dark bill (50% or more)
4. completely dark bill

- *The number of outer primaries not replaced during the pre-breeding moult.* Unmoulted outer primaries appear contrastingly darker.

- *The degree of contrast between the dark outer primaries and grey inner primaries.* This was scored on an ascending scale from 1 (low contrast) to 3 (high contrast).

Results

Information was gathered on 1,001 individual Common Terns, many of which were seen in several years, yielding a maximum sample size of 1,591. Not all of the four features described above were noted on every individual, so that sample size is variable.

Frequency of occurrence of immatures

More than half (632 out of 1,001, or 63%) of the individual Common Terns of known age in our study at Seaforth have first been seen as second-summers, and about 40% (632 out of 1,591) of all observations (including birds seen in more than one year) have been of second-summer birds. Contrary to some of the statements in the literature, it seems highly likely that the vast majority of, if not all, second-summer Common Terns return to the breeding grounds at some time. Of 80 individuals which were ringed as chicks at Seaforth and seen there subsequently, all but eight were first recorded again in their second summer.

First-summer birds are considerably rarer, with only nine (0.9% of individuals and 0.6% of all observations) recorded at Seaforth during our study. Survival rates for immature Common Terns are not known, but annual mortality of adults is approximately 8-16% (Cramp 1985). Assuming that most birds do return in their second summer, and that immature mortality rate matches that of adults, then the potential number of first-summer individuals that could have been seen at Seaforth had they returned would have been around 700-800. It therefore appears that about 1% actually do return in their first year. This is supported by the absence of sightings at Seaforth of first-summers ringed as chicks at this site, compared with sightings of 72 second-years; and by the recording of three first-summers ringed at Shotton Steelworks, Flintshire (from where most terns seen at Seaforth originate), compared with 414 second-years ringed there.

Head pattern

Very few adult (third-summer or older) Common Terns show any white on the forehead during the early part of the breeding season. Less than 1% of adults seen before 30th June did so, and none had any completely white feathers but, rather, narrow white tips to otherwise black feathers.

Among adults, the onset of the post-breeding moult of the head feathers may occur in early July. In 1999-2000, one-third (30 out of 96) of the Seaforth terns showed some white on the forehead by the end of July, but their visible loss of feathers made them easily distinguishable from individuals which had acquired white feathers during the pre-breeding moult.

Most second-summer birds arrive at Seaforth in June and July, on average about three to four weeks later than adults (SJW, unpublished data). Their post-breeding moult also begins later than that of adults: during 1999-2000, none exhibited any sign of head moult during July and only about one-fifth (16 out of 78) did so by the end of August. Comparisons between adults and second-summers are therefore based on observations made prior to the end of June and the end of July, respectively.

Table 1 (on page 272) illustrates the wide variation in head pattern of second-summer Common Terns in the early part of the season. A clear majority, almost two-thirds, are indistinguishable from adults. Most of those which can be identified as immatures show rather limited amounts of white on the forehead, with fewer than 10% exhibiting the

156. Second-summer Common Tern *Sterna hirundo*, Seaforth, Liverpool, Merseyside, June 1999. A typical early-breeding-season individual, with fully 'adult' head and body plumage. The only clues to its immaturity are the relatively large amount of black on the bill and the moderate contrast between the moulted (P5) and unmoulted (P6-P10) primaries. *Steve Young*/Birdwatch

157. First-summer Common Tern *Sterna hirundo*, Seaforth, Liverpool, Merseyside, June 1995. This individual shows a mixture of non-breeding plumage (a reduced black cap, white underparts and a carpal bar) and breeding plumage (relatively bright bare parts). It is in active moult, with P5-P7 newly replaced and P8 dropped. Note the heavily worn two outermost juvenile primaries (P9-P10). Primary moult was almost complete when the bird was last seen at this site, on 22nd August. This was the first proven record of a first-summer Common Tern at Seaforth; happily, it lives on, having been trapped and released by ringers in Huelva, Spain, in late August 2000. *Steve Young*/Birdwatch





Table 1. Head pattern of second-summer and adult Common Terns *Sterna hirundo*, Seaforth, Merseyside.

Pattern	Number of individuals (%) Second-summers (to 31st July)		Adults (to 30th June)	
1. Solid black cap	285	(65.7)	690	(99.3)
2. White flecks on forehead	111	(25.6)	5	(0.7)
3. White patch on forehead	30	(6.9)	0	
4. Non-breeding-plumage pattern	8	(1.8)	0	
Totals	434		695	

supposedly classic 'second-summer' head pattern. Finally, a small minority are essentially in non-breeding plumage.

Bill colour

Observations at Seaforth indicate that, unlike the head pattern, which remains stable between the pre- and post-breeding moults, the bill colour of both adult and immature Common Terns often changes during the breeding season. The dark tip of the bill is progressively lost in the early months, before the bill darkens again once breeding is completed.

Second-year birds do have a significant tendency (chi-square = 22.03, $p<0.0001$, df 2) to have more black on the bill than adults (table 2), but the difference is small and the majority of both age groups show similar dark-tipped bills. Of 250 second-summers which had a fully black cap, 68 (27.2%) had a mostly or wholly dark bill. This is significantly more than for adults, but not sufficient

Table 2. Bill colour of second-summer and adult Common Terns *Sterna hirundo*, Seaforth, Merseyside.

Pattern	Number of individuals (%) Second-summers (to 31st July)		Adults (to 30th June)	
1. Completely orange-red	0		18	(5.0)
2. Dark tip	254	(67.4)	279	(77.7)
3. 50% (or more) dark	118	(31.3)	62	(17.3)
4. All dark	5	(1.3)	0	
Totals	377		359	

for this character to be of use for reliable determination of age. No adults had a wholly dark bill, and only a minority of first-summers did so.

Primary moult

Before their return to the breeding grounds, Common Terns moult and replace a variable number of inner primaries. These fresh, grey feathers contrast with the unreplaced dark outer primaries, giving rise to the species' characteristic dark outer wing, or 'primary wedge', in flight.

The outer primaries darken with age as the greyish bloom which initially covers them wears away. The contrast between these older outer primaries and the new inner primaries should, therefore, increase in line with the disparity in the age of the two series of feathers.

Some previous authors have described the outer primaries of second-summer terns

158. First-summer Common Tern *Sterna hirundo*, Seaforth, Liverpool, Merseyside, June 1999. An essentially non-breeding-plumaged individual. Note that, in contrast to the bird in plate 157, this one has replaced all the juvenile primaries. It first arrived on 31st May, earlier than any other British-ringed immature Common Tern at Seaforth. Within a week, what was probably this bird was back at its natal colony at Pennington Flash, Greater Manchester. *Steve Young*/Birdwatch

159. Non-breeding-plumaged Common Tern *Sterna hirundo*, Seaforth, Liverpool, Merseyside, July 1998. The age of this individual is unknown, but it is probably a first- or second-summer. No adult has been recorded in full non-breeding plumage this early in the year. The relatively fresh and evenly aged outer primaries are a good, but not conclusive, indicator of immaturity. *Steve Young*/Birdwatch



Table 3. The degree of contrast between inner and outer primaries of second-summer and adult Common Terns *Sterna hirundo*, Seaforth, Merseyside.

Contrast	No. of birds (%) to 30th June		No. of birds (%) to 31st August	
	Adults	Second-summers	Adults	Second-summers
1. Low: outer primaries pale grey	2 (1.6)	33 (52.3)	3 (1.1)	101 (35.1)
2. Moderate: outer primaries dark grey or blackish	83 (68.6)	27 (43.5)	151 (52.2)	172 (59.7)
3. High: outer primaries black	36 (29.8)	2 (3.2)	135 (46.7)	15 (5.2)
Totals	**121**	**62**	**289**	**288**

as being markedly darker than those of adults. Our study reveals the opposite to be true: second-summers are significantly more likely to show less contrast both early in the year (up to 30th June; chi-square = 75.18, $p<0.0001$, df 2) and throughout the breeding season (up to 31st August; chi-square = 189.71, $p<0.0001$, df 2). The results are summarised in table 3.

During the breeding season as a whole, most Common Terns (of all ages) showed moderate primary contrast. A large proportion of second-summers had barely contrasting inner and outer primaries, however, and very few had solidly black outers. On adults, these proportions are reversed. Although the outer primaries of both adults and second-summers darken as the breeding season progresses, second-summers show, on average, less contrast than do adults.

Underpart colour

Many previous authors have claimed that immature Common Terns usually show white, blotchy or paler grey underparts compared with adults. This proved to be extremely difficult to judge on perched birds in the field. Our observations suggested that the only difference was that individuals (of any age) which exhibited a high number of other non-breeding-plumage features also showed white or paler grey underparts, while all others had somewhat darker underparts and were indistinguishable from one another in this respect.

Carpal bar

During the seven years of the study, no adults showed any sign of a carpal bar during the breeding season, i.e. before about mid July. Observations of this feature on second-summer terns were not comprehensive, but no individual with a full cap also had a carpal bar, while all those with non-breeding-type head plumage did have. A total of 16 birds with some degree of white on the forehead was noted as having a carpal bar, although this is probably an underestimate. Nonetheless, the proportion of second-summers exhibiting this feature appears to be too small for it to be of value in determining their age.

First-summer birds

The number of known first-summer Common Terns observed at Seaforth is small, and it is impossible to draw firm conclusions from such a sample. Even from this small sample, however, certain patterns are apparent (table 4 on page 276).

Only two of the nine terns definitely had retained juvenile outer primary feathers. One of these (the individual in table 4 first observed on 29th June; plate 157) was actively replacing its outer primaries throughout the summer, having dropped P9

160. Common Terns *Sterna hirundo*, Seaforth, Liverpool, Merseyside, September 1998. The individuals in this photo exhibit a variety of stages of moult between breeding and non-breeding plumages. Their ages are unknown. *Steve Young*/Birdwatch

161. Common Tern *Sterna hirundo*, age unknown, Seaforth, Liverpool, Merseyside, September 1998. This individual shows full breeding plumage on head and body and bright bare parts very late in the season, perhaps indicating that it is a second-summer rather than an adult. It also has only three unmoulted outer primaries, and no adult has yet been recorded at Seaforth with fewer than four. *Steve Young*/Birdwatch





Table 4. Characteristics of nine first-summer Common Terns *Sterna hirundo*, Seaforth, Merseyside.

Date first seen	31/5	29/6	2/7	25/7	9/8	13/8	18/8	22/8	4/9
Unreplaced outer primaries	6	2	6	6	6	6	6	6	6
Primary-moult-contrast score	1	3	1	1	1	2	3	?	3
Retained juvenile primaries	No	Yes	No	No	No	?	Yes	?	?
Retained juvenile secondaries	No	Yes	No	?	No	?	Yes	?	?
Head-pattern score	4	3	2	3	3	3	4	2	4
Bill-colour score	3	3	3	3	2	3	4	3	4
Carpal bar	Yes	Yes	No	Yes	No	No	Yes	No	Yes

(primaries numbered descendently, with P10 referring to the outermost) by 11th July and P10 by 22nd August, when P9 was fully regrown and P10 half-grown. The second individual still possessed at least six juvenile outer primaries in mid August. These two terns were the only ones to show a dark bar on the inner secondaries, a result of retained juvenile feathers.

Four individuals had already replaced all juvenile primaries and showed very little moult contrast, indicating that the process had been completed relatively recently.

Although none had a full, adult-like, dark cap, the head pattern of most was indistinguishable from that of some second-summers. Similarly, while bill coloration was generally dark, only two had an all-dark bill. A majority had a dark carpal bar, indicative of non-breeding plumage.

It is clear from table 4 that first-summers are extremely variable. Only three showed a full non-breeding head pattern, and just two of these had an all-dark bill. Significantly, one of these non-breeding-plumaged birds had replaced all its juvenile primaries, suggesting that, in the case of immatures, head and body moult may proceed separately from that of the flight feathers.

Discussion

With the ever-growing interest in identification matters, and the associated recognition of the importance of ageing birds correctly, it has become increasingly frequent for observers to ascribe individual terns to precise age categories. This is due, to a large extent, to the well-founded advances in the identification and ageing of gulls. The analogy between gulls and terns is misplaced, however. Gulls acquire adult plumage through year-by-year changes in plumage and bare-part patterns, whereas terns do not. All Common Terns, once they have completed the post-juvenile moult, closely resemble adults in plumage. Differences between breeding and non-breeding plumages are far more significant. Immatures in non-breeding plumage are effectively indistinguishable from similarly plumaged adults. The presence of non-breeding-plumage features during the breeding season does, however, allow some individuals to be recognised as immature.

Within a brief period of time – broadly speaking, from April until the end of June – any Common Tern in northern latitudes which shows any more white on the forehead than a few white feather tips can probably safely be aged as immature, i.e. as either a first-summer or a second-summer. By the end of July, at least a quarter of adults are already moulting to winter plumage and are indistinguishable from these immatures.

There is a strong tendency for second-summers to replace more inner primaries than adults before their return to the breeding grounds, this producing a narrower dark wedge on the outer wing. This is perhaps because they remain longer on the wintering grounds. It is most common for adults to have five or six unreplaced outer primaries, and for second-years to have four or fewer (SJW, unpublished data). Nevertheless, a considerable degree of overlap exists, and the average number of feathers replaced varies significantly between years. Primary moult, therefore, cannot generally be used to age Common Terns.

Any individual which has retained juvenile flight feathers (very worn, dark outer primaries, or dark secondaries forming a secondary-bar), however, can safely be aged as first-summer. Such individuals form only a tiny minority, fewer than one in 500 at Seaforth,

and these are the only Common Terns, other than juveniles, that can be aged precisely.

The majority of second-summers cannot be distinguished from adults. Almost two-thirds of second-summers show adult-type head and body plumage. They tend to have more black on the bill than adults, to have replaced more inner primaries and to exhibit less primary moult contrast; but there is a great deal of overlap. This reveals the greatest weakness of the gull analogy: no Common Tern can safely be described as an adult! Differences in appearance between second-summers and adults apply only on average; for most individuals they cannot be used, even in combination, to determine precise age.

The belief that most second-summer Common Terns remain on the wintering grounds may be based upon the false assumption that they can be identified as being of that age. Observations at Seaforth, however, indicate that at least a large majority return to the breeding grounds. The wing-moult strategy of this species is complex (Baker 1993), and its timing and extent in immatures are not well documented, but there is no sufficient reason to believe that, as has sometimes been claimed, the outer primaries of second-years are replaced earlier (and therefore appear darker) than those of adults. Our observations show the opposite to be more often the case, and perhaps suggest that completion of the full wing moult occurs later among second-winter birds than among adults.

Just as adults cannot safely be distinguished from second-summers, some second-summer individuals cannot be separated from many first-summers. The majority of first-summer Common Terns seen at Seaforth have more closely resembled what is traditionally regarded as second-summer plumage. Most first-summers appear to have completed, or to be in the process of completing, the moult of the juvenile flight feathers. Those with retained juvenile features may be aged as first-summers, but many do not exhibit these age-diagnostic features. Since very few first-summer birds return to the breeding grounds, it is possible that those which do so are atypical in other ways and perhaps more 'advanced' in plumage than most, and are therefore not representative of the age group as a whole.

To add to the confusion, a small minority of second-summer individuals show few or no signs of breeding plumage. Of a total of eleven Common Terns seen at Seaforth which showed the supposedly 'classic first-summer' features of white forehead, reduced black cap, 'lobed' ear-coverts, all-dark bill etc., eight were in fact second-summers. So, although a larger proportion of first-summers resemble '*portlandica*' types in these features, the majority of such terns may actually be second-summers.

In summary, 'first-summer-type' Common Terns are most likely to be second-summers; 'second-summer-types' may be first-summers; and 'adults' may in fact be second-summers. We propose, therefore, that, with the minor exception of individuals with retained juvenile remiges (which thus must be first-summers), the terms 'first-summer', 'second-summer' and 'adult' should cease to be used for field identification of Common Terns, and perhaps also for that of other tern species which share a similar moult strategy. Instead, the term 'adult-summer-type' should be applied to all those displaying full breeding plumage, including, especially, a completely dark cap. Early in the breeding season, when they are safely distinguishable from 'adult-types', all others should be labelled simply as 'immature'.

Acknowledgments

We are grateful for the many helpful comments made by Colin Bradshaw, Tim Melling and Steve Young on earlier drafts of this paper.

References

Baker, K. 1993. *Identification Guide to European Non-Passerines*. BTO Guide 24.

Cramp, S. (ed.) 1985. *The Birds of the Western Palearctic*. vol. 4. Oxford.

Grant, P. J., Scott, R. E., & Wallace, D. I. M. 1985. Further notes on the 'portlandica' phase of terns. In Sharrock, J. T. R. (ed.), *Frontiers of Bird Identification*. Biggleswade.

Kaufman, K. 1990. *Advanced Birding*. Boston, USA.

Malling Olsen, K. M., & Larsson, H. 1995. *Terns of Europe and North America*. London.

Scott, R. E., & Grant, P. J. 1985. Uncompleted moult in Sterna terns and the problem of identification. In Sharrock, J. T. R. (ed.), *Frontiers of Bird Identification*. Biggleswade.

Svensson, L., Grant, P. J., Mullarney, K., & Zetterström, D. 1999. *Collins Bird Guide*. London.

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Greenish Warbler, 'Two-barred Greenish Warbler', and the speciation process

Martin Collinson

ABSTRACT This Taxonomic Research Update draws birdwatchers' attention to the work of Irwin *et al.* (2001) on Greenish Warblers *Phylloscopus trochiloides*. Their research shows that two subspecies, *P. t. viridanus* and *P. t. plumbeitarsus*, both of which occur as vagrants in western Europe, do not interbreed in the region where their ranges overlap because they do not recognise each other's songs. The subspecies of Greenish Warbler are perhaps the best example of an avian 'ring species', and in this case sexual selection for increased complexity of song is driving the speciation process.

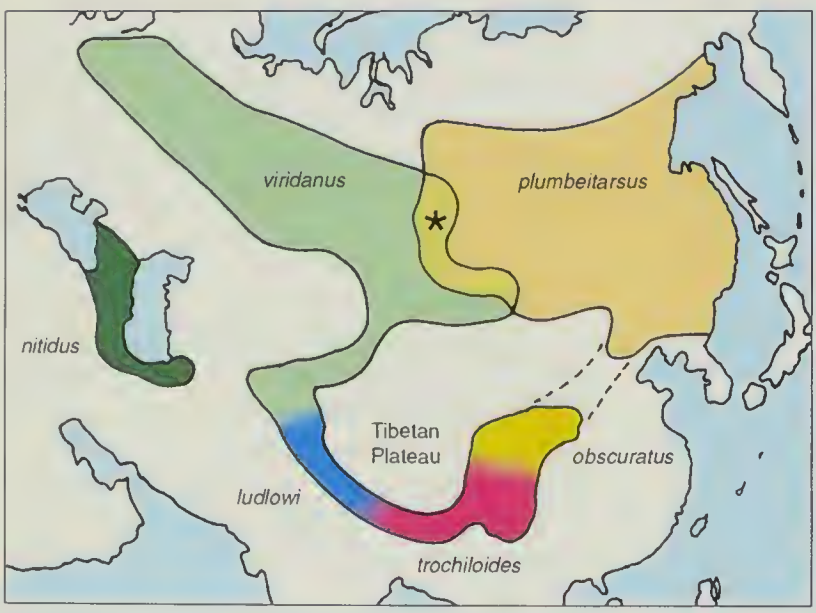


Fig. 1. Distribution of the races of Greenish Warbler *Phylloscopus trochiloides*. Racial variation is clinal through the intergradation of the subspecies *viridanus* (eastern Europe to western Asia and Afghanistan), *ludlowi* (southeast Afghanistan to Kumaon), *trochiloides* (central and eastern Himalayas), *obscuratus* (central China) and *plumbeitarsus* (eastern Russia); the dotted lines indicate a gap in the distribution due to deforestation. The 'Green Warbler' *P. t. nitidus* is fully allopatric, and is not considered further. All other subspecies interbreed with adjacent subspecies with the exception of *viridanus* and *plumbeitarsus*, which show no apparent intergradation in the zone where their distributions overlap (indicated by *). 'Two-barred Greenish Warbler' *P. t. plumbeitarsus* was regarded as a separate species, *P. plumbeitarsus*, by Cramp (1992).

Introduction

The Greenish Warbler *Phylloscopus trochiloides* is a polytypic species that breeds across much of temperate Asia, and as far west as eastern Europe. Six subspecies are recognised (Ticehurst 1938), their breeding distributions being shown in fig. 1. Greenish Warblers of the subspecies *viridanus* are regular vagrants to western Europe, although *P. t. plumbeitarsus* ('Two-barred Greenish Warbler') and *P. t. nitidus* ('Green Warbler') have also occurred there (Dean 1985; see also pages 284-288).

The Greenish Warbler complex is one of the few putative avian examples of a 'ring species'. Ring species, most influentially described by Mayr (1963), are deemed to be a possible result of one species expanding its range in a ring-like manner around an area of unsuitable habitat (see fig. 2).

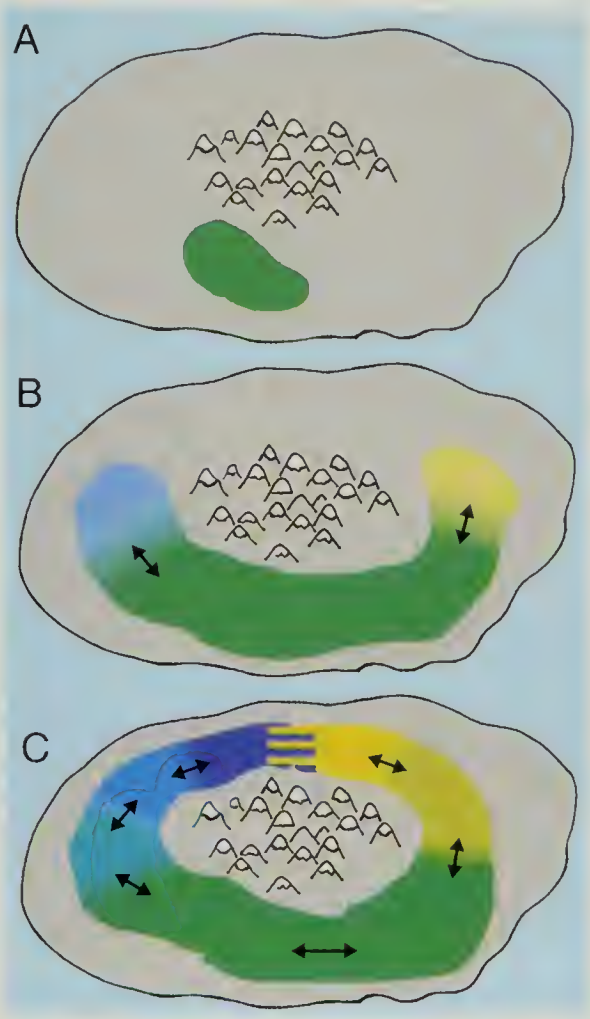


Fig. 2. Hypothetical formation of a ring species. Panel A represents the ancestral distribution of a species, shown in green. In B, the species' range starts to expand, perhaps as a result of climatic amelioration, around the sides of an area of unsuitable habitat (in this case, a mountain range): as expansion proceeds, populations on each side of the mountain range evolve genetic and morphological differences (represented by blue and yellow), either by chance or because the selection pressures on each one are different; nevertheless, there is limited gene flow and intergradation between adjacent populations (represented by double-headed arrows). In C, the opposite ends of the ring meet on the far side of the area of unsuitable habitat: the races of the ring species at these terminal points of the chain have diverged to such an extent that they are reproductively isolated, i.e. they do not interbreed, and thus behave as separate species; gene flow is maintained between all other races in the ring.

Under certain conditions, a chain of racial variants may arise, each race able to breed and intergrade with its neighbours, except for those co-existing at the two overlapping 'ends' of the ring, which have diverged so much that they behave as different species.

The conditions that lead to the formation of a ring species are not fully understood, and the validity of some of the classic examples, such as the Herring Gull *Larus argentatus*/Lesser Black-backed Gull *L. fuscus* circumpolar ring, and the Eurasian ring of Great Tits *Parus major*/Grey Tits *P. afer*, has been seriously challenged by new taxonomic data. Similarly, although Greenish Warblers of the subspecies *viridanus* and *plumbeitarsus* have been reported not to interbreed (Cramp 1992), there has been considerable ambiguity concerning the relationship between the two, no thorough analysis of which had been undertaken until recently, with the results published in the journal *Nature* (Irwin *et al.* 2001).

Recent research

Many of the fundamental gaps in our knowledge about the subspecies of Greenish Warbler have been addressed in the *Nature* paper mentioned above. Irwin *et al.* used behavioural, morphological and genetic data to show that *viridanus* and *plumbeitarsus* apparently do not recognise each other as conspecifics, and that there is no detectable gene flow between the two. They are linked, however, around the southern edge of the Tibetan plateau by a ring of intergrading, intermediate subspecies. Greenish Warblers hence fulfil many of the critical requirements of a 'typical' ring species.

In the study, Greenish Warblers of all subspecies were observed at 29 sites throughout the entire range. Various biometric and plumage characters were recorded, sonograms were constructed and analysed, the responses to songs of the same and of different subspecies were measured, and blood samples were taken for genetic analysis.

Northern races of Greenish Warbler, *viridanus* and *plumbeitarsus*, have longer and more complex songs than the nominate southern subspecies *trochiloides*. The authors demonstrated parallel gradients of increasing song length and complexity on both the eastern and the western sides of the Tibetan plateau. By breaking down the songs into their principal components, they were able to show that there are smooth clines in song structure from *trochiloides* to *viridanus* on the west side of the ring, and from *trochiloides* to *plumbeitarsus* on the east side. It is presumed that, during the



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162. Greenish Warbler *Phylloscopus trochiloides* of the subspecies *viridanus*, Quendale, Shetland, September 1994.



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163. Greenish Warbler *Phylloscopus trochiloides* of the subspecies *viridanus*, Sumburgh, Shetland, August 1996.

species' northward range expansion following glaciation, sexual selection encouraged this increasing complexity, favouring males with more elaborate songs. Although there have been parallel pressures to evolve longer, more complex songs, however, the songs have developed differently on each side of the Tibetan plateau: *viridanus* have songs of high frequency range, composed of three or four long song units, while *plumbeitarsus* have songs with a lower frequency range, composed of seven or eight shorter units. This divergence, although smooth and gradual, has, therefore, led to the manifestation of noticeably different songs in *viridanus* and *plumbeitarsus*.

What is perhaps more interesting is that the differences in song structure that we hear are of biological significance to the birds themselves. Typically, male passerine birds exhibit a strong territorial response to playback of songs which, although not identical to their own, they recognise as coming from a competing male of the same species. If they do not recognise the song as being that of a competitor, for a territory or a mate, they do not react.

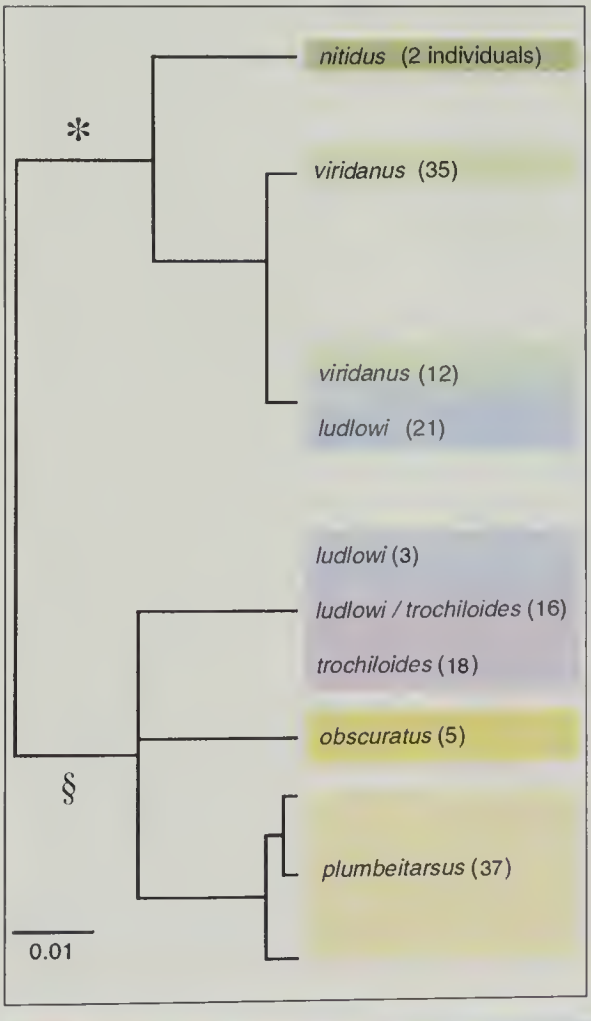
Irwin *et al.* subjected male Greenish Warblers of each subspecies to playback of the songs of all other subspecies, and measured the strength of their response. They found that, in general, Greenish Warblers reacted strongly to the songs of their own or neighbouring populations or subspecies, but less strongly to those of more distant populations. For example, *trochiloides* recognised *ludlowi* and *obscuratus* as being from the same species, but showed a weaker response to *viridanus* songs; *ludlowi* showed a strong response to many *viridanus* and *trochiloides*, but a weaker response to *obscuratus*; and so on. In general, individuals reacted aggressively to the songs of subspecies which occurred within approximately 1,500 km of their own territory, but less strongly or not at all to songs of those beyond that range, presumably because the latter's songs were too different from their own. One notable exception was the reaction of *viridanus* to *plumbeitarsus*. Individuals of these two subspecies within their zone of overlap showed no response to each other's songs, and, indeed, sometimes shared territories. The clear, measurable differences in their songs, as a result of their being at the opposite ends of the ring of subspecies varia-

tion, are therefore also registered by the birds themselves. They behave as different species.

To determine whether this incipient speciation of the Greenish Warblers was reflected in their genetic history, a phylogenetic tree was drawn up. This is based on an analysis of 1,200 base pairs of mitochondrial DNA (mtDNA) from 149 individuals of all races, taken from sites throughout the entire range of the species. These data are summarised in a simplified form in fig. 3. This gene tree demonstrates a deep genetic split between western and eastern birds. In the zone of overlap of *viridanus* and *plumbeitarsus* in Siberia, genetic differences were fully in accordance with differences in physical appearance: i.e. all *viridanus* had the 'western-clade' DNA, and all *plumbeitarsus* had the 'eastern-clade' DNA. There is therefore no evidence of gene flow between the populations of *viridanus* and *plumbeitarsus* in Siberia, a finding which supports the behavioural evidence derived from the song-playback experiments.

Interestingly, the boundary between the eastern and western genetic lineages falls within the range of one of the subspecies, *ludlowi*. Around this boundary, there are no morphological or song differences between warblers carrying the eastern-clade DNA and those with the western-clade DNA structure, and the playback experiments confirm that the birds do not distinguish between individuals carrying the different mtDNA lineages. While direct gene flow between *viridanus* and *plumbeitarsus* in Siberia does not occur, it would seemingly be possible for gene exchange to take place 'via the back door' (i.e. through the chain of intermediate subspecies encircling the southern edge of the Tibetan plateau). Nevertheless, gene flow around this ring is apparently not great enough to disrupt the genetic differentiation of the Greenish Warbler populations; this is presumably a classic case of 'isolation by distance'.

The trends in other genetic (microsatellite) and morphological (width of the greater-covert wing-bar) characters were followed for individuals in the ring of subspecies from *viridanus*, through *ludlowi*, *trochiloides* and *obscuratus*, to *plumbeitarsus*. Again, an apparent lack of gene flow in the Siberian overlap zone was demonstrated, but there was significant continuing or recent gene flow between adjacent subspecies along the southern side of the ring.



Discussion

The classic explanation of the Greenish Warbler as constituting a ring species would postulate that the ancestral populations inhabited the forested sub-Himalayan region. During the Ice Ages, much of Siberia would

Fig. 3. A gene tree, derived from analysis of mitochondrial DNA, showing the deep genetic split between eastern and western subspecies of Greenish Warbler *Phylloscopus trochiloides*. For clarity, the shaded boxes represent clusters of genetically similar individuals. A western-clade DNA (*) contains all the individuals of *viridanus* and *nitidus* and a proportion of the *ludlowi* populations, whereas an eastern-clade DNA (§) is representative of other *ludlowi* individuals, as well as all *trochiloides*, *obscuratus* and *plumbeitarsus*. Individuals labelled *ludlowi/trochiloides* were taken from the *ludlowi* end of the intergrade zone between those two races. See text for discussion.



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164. Greenish Warbler *Phylloscopus trochiloides* of the subspecies *plumbeitarsus* ('Two-barred Greenish Warbler'), Happy Island, China, May 1994.

have been treeless; as the glaciers retreated and lowland temperate Asia became reforested, Greenish Warblers expanded their range northwards, skirting the edges of the still treeless Tibetan plateau. The genetic split in mtDNA lineages between eastern and western birds may have occurred by chance, as a result of random genetic drift. Sexual selection caused significant divergence of both the songs and the morphology of populations on the east and west sides of Tibet in a geographically smooth manner, such that, when the eastern and western birds came back into contact in Siberia, they no longer recognised each other and did not interbreed.

The data cannot, however, exclude a second possibility, namely that, during the Ice Ages, there were two genetically divergent, allopatric subspecies of Greenish Warbler: a western subspecies near the Himalayas; and an eastern subspecies, with double wing-bars, presumably somewhere in southeast Asia. These two subspecies expanded and met in the postglacial period, each one evolving more complex songs as it moved northwards. Two new zones of contact were formed: one to the south of the Tibetan plateau (where the birds recognised each other as potential mates and interbred), and one to the north (where they did not recognise each other).

There are some controversial differences between the two models outlined here, but birdwatchers need not be too bothered about them. The conditions that lead to the formation of a ring species may well, in practice, involve periods of range-splitting and subsequent divergence in allopatry. If we think of the evolution of the subspecies of Greenish Warbler in terms of the classic ring species, based on expansion of an ancestral Himalayan population, but then superimpose the possibility that genetic divergence has been maintained, or at least helped along, by periods of range contraction and splitting during glacial periods, followed by secondary contacts between the races during range expansion, we are probably not too far away from a conceptual basis for understanding what has happened.

Males of *plumbeitarsus* and *viridanus* do not recognise each other as conspecifics; there are no intermediate individuals in the Siberian overlap zone; and, while direct gene flow between the two would be expected to occur if females of one subspecies were mating with males of the other, none has been detected. Furthermore, although it has been possible until recently for gene flow to occur indirectly, via the ring of intermediate subspecies, this ring has now been broken by deforestation in China (fig. 1). There seems little chance that the separate evolutionary lines taken by *viridanus* and *plumbeitarsus* will ever again merge into one. Perhaps those birders who have seen *plumbeitarsus*, or 'Two-barred Greenish Warbler', are justified in following the line taken by *BWP*, giving this taxon separate specific status. Were such a split to be adopted, however, some or all of the southern subspecies might conceivably be

left in limbo, since it would be impossible to assign them to either Greenish Warbler or Two-barred Greenish Warbler.

It is often assumed that a complete understanding of the stages by which speciation occurs is not possible, because no single study has demonstrated the evolution of a new species through all the 'grey-zone' intermediates (as shown diagrammatically in Collinson 2001). The process by which one species may, over time, split into two increasingly divergent populations which eventually become species, fully isolated reproductively, is illustrated neatly, however, by ring species. All the intermediate stages are extant and represented in geographical space. Examples of ring species such as the Greenish Warbler are perhaps, therefore, the most graphic argument to counter the views of those people who continue to believe that Darwinian evolutionary theory cannot explain how one species becomes two.



David Tipling/Windrush

165. Greenish Warbler *Phylloscopus trochiloides* of the subspecies *plumbeitarsus* ('Two-barred Greenish Warbler'), Happy Island, China, May 1993.



Colin Bradshaw

166. Greenish Warbler *Phylloscopus trochiloides* of the subspecies *plumbeitarsus* ('Two-barred Greenish Warbler'), China, spring.

References

Collinson, M. 2001. Shifting sands: taxonomic changes in the world of the field ornithologist. *Brit. Birds* 94: 2-27.

Cramp, S. (ed.) 1992. *The Birds of the Western Palearctic*. vol. 6. Oxford.

Dean, A. R. 1985. Review of British status and identification of Greenish Warbler. *Brit. Birds* 78: 437-451.

Irwin, D. E., Bensch, S., & Price, T. D. 2001. Speciation in a ring. *Nature* 409: 333-337.

Mayr, E. 1963. *Animal Species and Evolution*. Cambridge, Mass.

Ticehurst, C. B. 1938. *A Systematic Review of the Genus* Phylloscopus. New York.

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'Two-barred Greenish Warbler' on Scilly: new to Britain and Ireland

Colin Bradshaw

The fact that October 1987 was a 'classic Scilly October' was scant comfort to me, since I had arrived on the Isles of Scilly just too late to see both a Philadelphia Vireo *Vireo philadelphicus* and a Hermit Thrush *Catharus guttatus*. To add insult to injury, my friends had trapped a Blyth's Reed Warbler *Acrocephalus dumetorum* near my home in Tynemouth, Tyne & Wear, on the day that I arrived on the islands.

On 22nd October, a drab Yellow-browed Warbler *Phylloscopus inornatus* was reported on Gugh (the small island to the east of St Agnes, accessible by a causeway at low tide), and, on the following day, my father, Tom, and I went there to look for migrants. We had covered most of the moor on the south side of the island, and were coming back to the central fields when we saw a small *Phylloscopus* warbler, flicking through the brambles *Rubus* along the southern edge of the fields. We watched it for several minutes, and were completely perplexed. It looked superficially like a Yellow-browed Warbler, with an obvious supercilium and two wing-bars, including a broad greater-covert bar. It showed no sign of any pale tertial edges, however, and it had dark legs, and a pale bill which we thought may have been slightly larger than that of a Yellow-browed Warbler. We discussed whether it could be an adult Yellow-browed, perhaps with the pale tertial fringes worn away, since neither of us was aware of the moult strategy of that species, but we were still at a loss to explain the bare-part coloration. In addition, it seemed to have a longer tail than we



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167 & 168. Greenish Warbler *Phylloscopus trochiloides* of the race *plumbeitarsus* ('Two-barred Greenish Warbler'), Gugh, Scilly, October 1987.



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© *British Birds* 94: 284-288, June 2001

expected. We took full notes and retreated back to St Agnes.

While we were away, pandemonium had broken out on St Agnes, with a Booted Warbler *Hippolais caligata*, a Red-rumped Swallow *Hirundo daurica*, and a strange Rufous Nightingale *Luscinia megarhynchos* near the Post Office (Bradshaw 1996). Nevertheless, I collared Alan Dean, John Ridley and Pete Lansdown to talk through the warbler which we had just seen on Gugh. We were soon able to eliminate aberrant Yellow-browed Warbler, since the freshness of the rest of the plumage ruled out the possibility that the tertial edges might be missing through wear. While none of us was particularly familiar with Greenish Warbler *P. trochiloides* of the race *plumbeitarsus* ('Two-barred Greenish Warbler', and referred to as such hereafter), there was enough in my description to convince everyone that we needed another look, even though the tide was on its way in. Pete, Tom and I set off, and spent the high-tide period over on Gugh, during which time we managed superb, prolonged views of the bird, and obtained a series of photographs sufficient to confirm its identification as Two-barred Greenish Warbler.

The next day, the bird showed well to all those who were able to visit Gugh, and it remained on the island until 27th October.

Description

General A small, bright, active *Phylloscopus* warbler, reminiscent of both Yellow-browed and Greenish Warblers. Compared with Yellow-browed Warbler, it seemed slightly larger and longer-tailed, it had a more obvious neck, and it also lacked the constant motion of that species. Compared with Greenish Warbler, it appeared to have a larger head and to be slightly more pot-bellied.

Head and neck Crown olive-green with a grey cast, darkening slightly towards the lateral edges. There was a prominent yellow supercilium, flaring behind the eye, where it was broad and very striking, before narrowing again with a suggestion of an upward kink onto the nape; in front of the eye, the upper border was somewhat less distinct, and with a slight indentation, making it slightly less obvious there. There was a thin, very dark eye-stripe in front of the eye, which became broader and paler behind the eye, and there was a distinct yellow crescent below the eye. The cheeks were smudged grey, and the throat was white.

Upperparts The mantle and rump were olive-green, slightly greyer than the crown. The wings were generally of a similar colour, but without the grey cast. There were bright green edges to the secondaries and tertials, while the primaries were dark, with bright edges on the proximal two-thirds. The median coverts were tipped white, forming an indistinct wing-bar that was more obvious on the left wing. The greater coverts were dark-centred, with broad green fringes, and with broad, square, creamy tips forming an obvious, wide wing-bar that reached right across the whole width of the greater coverts. There were bright green edges to the tail, most obvious near the base of the feathers.

Underparts The underparts were sullied white, with grey smudging on the sides of the breast. There was some yellow present on the sides of the breast, near the wing-bend.

Bare parts The bill was predominantly pale, with just the culmen and tip of the upper mandible dark. It was perhaps slightly longer than that of Yellow-browed Warbler, but this was not a noticeable feature. (Some observers thought that the bill looked long, but this is not supported by the photographs, which suggest that the bill was relatively small). The legs were dark grey-brown, with the feet less grey and more brown.

Call I did not hear the warbler call, but others reported hearing it give a slurred, sparrow-like 'chirrup'.

Discussion

The identification of this bird was, at the time, quite challenging, since most observers' experience of the taxon, if they had any at all, was limited to a few individuals in spring, in Siberia. The perception of those Siberian birds was quite at odds with the warbler on Gugh, particularly in relation to the grey cast. In addition, most of the ones which I had seen had been singing, relatively high up in tall trees, and had therefore offered little opportunity for close study. Two-barred Greenish Warbler was also somewhat outside the mind-set of most British birders, and even Ian Wallace (1980) had failed to predict it as a likely vagrant (though less than a year later, in 1981, he would have done: *Brit. Birds* 74: 100). This latter point was amply demonstrated when I telephoned the news through to the Porthcressa that evening: 'Two-barred Greenish? – never heard of it, mate! Are you sure you know

what you're talking about?' Once everyone had seen the photographs, of course, the identification became straightforward. By the next day, everyone knew that it could not be an adult Yellow-browed Warbler, since that species has a complete post-breeding moult and therefore adults in autumn appear similar to young birds (including tertial edges). This situation was in marked contrast to that on the day of discovery, when Alan Dean was the only person who seemed sure of the species' moult strategy.

In terms of field characters, Two-barred Greenish Warbler occupies the overlap zone between Yellow-browed Warbler, Greenish Warbler of the race *viridanus* and Arctic Warbler *P. borealis*. In fact, while taxonomically most closely related to the second of those three, it is perhaps just as likely to be confused with Yellow-browed Warbler, although most European field guides highlight Greenish Warbler (i.e. *viridanus*) as the main confusion species. The presence of square tips on *all* the greater coverts (forming a *broad* whitish wing-bar), and a short median-covert bar are the key differences from Greenish Warbler. These two features, however, together with an obvious supercilium that broadens behind the eye, give Two-barred Greenish Warbler more than a passing resemblance to Yellow-browed Warbler. Of course, the size, the lack of white tertial edges, the call, and the bare-part coloration can all be used to separate the two. In addition, Two-barred Greenish lacks Yellow-browed's dark base to the secondaries that contrasts with the pale greater-covert wing-bar.



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169 & 170. Greenish Warbler *Phylloscopus trochiloides* of the race *plumbeitarsus* ('Two-barred Greenish Warbler'), Gugh, Scilly; October 1987.



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Two-barred Greenish Warbler is, perhaps, even more likely to be confused with Arctic Warbler, and in Hong Kong, where both species occur regularly, the identification criteria have only recently been clarified, and the true status of both taxa determined (Leader 1993). In China, the situation is complicated somewhat by the presence of Arctic Warblers with dark legs, which, to my knowledge, is not a problem likely to be encountered in western Europe. The head pattern of the two can be similar, with the supercilium not reaching the base of the bill, a strong loral line, and sullied cheeks with an obvious pale crescent below the eye. In addition, Arctic Warbler in autumn can often show a double wing-bar, although the greater-covert bar is rarely, if ever, as broad or as long as that of Two-barred Greenish. Furthermore, the supercilium of Arctic Warbler does not usually widen behind the eye, while the legs are usually strikingly pale, and the call is different (although see Bradshaw & Riddington

1997). Common wisdom has it that Two-barred Greenish is very white below, but that was not the case with the Gugh bird, which had quite an obvious grey cast on the sides of the breast that, once again, recalled Aretic Warbler. There is also a suggestion that the legs of Two-barred Greenish Warbler can be paler than is suggested by the name *plumbeitarsus* (van der Vliet *et al.* in press), which may also add to the potential for confusion.

This 1987 observation represents the first accepted record of Two-barred Greenish Warbler for Britain & Ireland (*Brit. Birds* 86: 517). There has been a subsequent record, in Norfolk in October 1996 (Kemp 1996; *Brit. Birds* 90: 501), while BBRC is currently examining another that pre-dates the Gugh individual described in this paper.

References

Bradshaw, C. 1996. The Scilly eastern Nightingale. *Birding World* 9: 197.

— & Riddington, R. 1997. How certain are the separation features of Arctic and Greenish Warblers? *Brit. Birds* 90: 180-184.

Kemp, J. 1996. The Two-barred Greenish Warbler at Wells. *Birding World* 9: 396-397.

Leader, P. J. 1993. The field identification of Aretic, Eastern Crowned, Two-barred Greenish and Pale-legged Leaf Warblers in Hong Kong. *Hong Kong Bird Report* 1992: 153-159.

Van der Vliet, R., Kennerley, P. R., & Small, B. In press. Identification of Arctic, Two-barred, Greenish and Bright-green Warblers. *Dutch Birding*.

Wallace, D. I. M. 1980. Possible future Palearetic passerine vagrants to Britain. *Brit. Birds* 73: 388-397.

Prof. Colin Bradshaw, 9 Tynemouth Place, Tynemouth, Tyne & Wear NE30 4BJ

EDITORIAL COMMENT Colin Bradshaw, Chairman of the British Birds Rarities Committee, commented: 'I found reviewing a record with which I have been so closely associated a somewhat bizarre experience. It was also interesting to see the comments of the Committee members at the time. Considerable doubts were expressed about four key aspects of the identification. Some photographs suggested that there were whitish tips and edges to the tertials (although this was not noted by any observer in the field), the bill seemed too small, and both the upperparts and the underparts seemed very grey-toned, which was at odds with the prevailing view at the time, namely that Two-barred Greenish Warbler was a very "green and white" bird. Concerned by these anomalies, BBRC members even discussed the possibility of Yellow-browed Warbler × Greenish Warbler hybrids! Photographs also showed fine "points" to the remiges and rectrices, which confirmed the age as a first-year, while at least one of the tail feathers was shorter than the rest, with fault-bars, doubtless the result of replacement of a missing feather.

'A more detailed analysis of the photographs suggested that the tertial markings, which seemed so clear-cut in some images, were, in fact, a photographic artefact, since they were absent in others. Furthermore, published biometrics indicated that, contrary to popular belief, the bill of Two-barred Greenish Warbler is of similar size to that of Greenish Warbler of the race *viridanus*. A detailed examination of skins was undertaken, and members came to the conclusion that there was a "peeking order" of identification features. Wing-bars which were broad, extending across all or most of the greater coverts and in a straight line proximally (rather than with crescent-shaped feather tips, typical of both Aretic Warbler and *viridanus* Greenish Warbler), and with broad tips to the median coverts, were the premier identification feature. The head pattern, with the supercilium only just reaching the bill base, might be a useful secondary feature.

'Because of the delay in publication of the details of this record, we can now compare the individual involved with a Two-barred Greenish Warbler seen at Wells, Norfolk, in 1996. This, too, showed initial similarities to Yellow-browed Warbler, and displayed a distinctly grey cast to the green crown and mantle, so perhaps this plumage feature is not particularly unusual for relatively fresh immatures. The Norfolk bird, however, apparently showed cleaner underparts and a longer bill than the Gugh bird.'

Tony Marr, Chairman of the British Ornithologists' Union Records Committee, commented: 'This is an amazing file of descriptions, photographs, references, advice from consultants and contributions of substance from members of the BBRC and the BOURC. One of the BOURC

members, halfway through the circulation, wrote that "It is testimony to the difficulties involved that the general conclusion is likely to be that this record will be accepted without the 100% confidence that normally characterises such decisions, and that the taxonomic position of Two-barred Greenish Warbler remains uncertain." This reflects the problems encountered in confirming the bird's identity, through what Colin Bradshaw refers to above as the "pecking order" of identification criteria. These problems did not diminish when a consultant in Thailand wrote that he had "no reason to doubt that the Scilly bird was a Two-barred Greenish Warbler", and a consultant in Sweden wrote that he had "no absolute and firm view on the case".

'Another BOURC member summed up the overall difficulties by suggesting that there were two problems here: "Was it a *plumbeitarsus*?" and "What is *plumbeitarsus*?" There was, in fact, a unanimous vote for acceptance of the identification on a single circulation, albeit a lengthy one as members worked their way through the voluminous file and made their own enquiries and researches. Many questions were asked about the taxonomy since, at that time, following Voous, *plumbeitarsus* should have been treated as a full species. The Taxonomic Sub-committee was then asked to examine the evidence for maintaining *plumbeitarsus* (and *nitidus*, too) as a full species. The outcome of its deliberations was published in December 1992 in the Records Committee's Eighteenth Report (*Ibis* 135: 220-222). The statement is reproduced in full below, since it throws helpful light on several aspects of the record.

'"Greenish Warbler *Phylloscopus trochiloides*. Add subspecies *plumbeitarsus* Swinhoe to Category A: First-winter, Gugh, Scilly, 22nd-27th October 1987: sight record; photographed (*Brit. Birds* 81: 95 and in prep.; see also *Twitching* 1: 333-336, *Birding World* 3: 430). This race, known as Two-barred Greenish Warbler, breeds southern central and eastern Siberia, Mongolia, and north-eastern China. It winters in southern China and South-east Asia south to peninsular Thailand. The race has also occurred in the Netherlands, first-winter, 17th September 1990 (*Dutch Birding* 14: 7-10, 83). Voous (op.cit.) treated *plumbeitarsus* as a separate, monotypic species, but recent evidence suggests that it might be better placed as a race of *trochiloides* (Glutz & Bauer 1991, *Handbuch der Vögel Mitteleuropas*, 12/II Passeriformes (3. Teil), Wiesbaden; Mild 1987, *Soviet Bird Songs*, 2 cassettes & booklet, Stockholm; Svensson 1992, *Identification Guide to European Passerines*, 4th edition, Stockholm). *P. nitidus*, known as Green Warbler, which is on the British and Irish list on the basis of a record in 1983, should similarly be treated as a race of *P. trochiloides* (Svensson 1992). Further research on this group of warblers is desirable."'

See also the paper by Martin Collinson on pages 278-283.

Looking back

Seventy-five years ago:

[From 'On Some New British Birds', by H. F. Witherby] 'THE PADDY-FIELD WARBLER.— *Acrocephalus agricola agricola* (Jerdon). SYLVIA (ACROCEPHALUS) AGRICOLA Jerdon, Madras Journ. Lit. & Sc. XIII., No. 31, p. 131 (1845—Nellore, Madras).

Surgeon Rear-Admiral Stenhouse is also the discoverer of this second addition to the British List. He states (*Scot. Nat.*, 1925, p. 173) that a male example of this species was shot by Mr. George Stout in a field of turnips at Fair Isle on October 1st, 1925. Admiral Stenhouse had seen a bird, which he considered was the same, on September 26th, and thinks that it probably arrived that day. There was a little east wind during the previous night.

This species, well known to Indian ornithologists as the Paddy-field Warbler, is a winter visitor to India. It breeds in Tsaidam, the Altai, East and West Turkestan, Transcaspia, Astrakhan and the Kirghiz Steppes and the south and middle Urals. A specimen obtained in the middle of April at the mouth of the Danube points to a possible more western extension of its breeding range. It was once obtained on Heligoland on June 12th, 1864. This specimen, the sex of which is not stated, was described by Gätke (*Birds of Heligoland*, p. 308) as being much worn, and this may account for the very small wing, the measurement of which is given as only 52 mm.' (*Brit. Birds* 20: 12-13, June 1926)

Note

Pair-hunting among large falcons

In early July 1984, in the Padjelanta National Park, Swedish Lapland, I witnessed a pair of Gyr Falcons *Falco rusticolus* successfully catching a Ptarmigan *Lagopus mutus* in the air by co-acting as a 'hunting team'. The two falcons were clearly the male and female of a breeding pair, the slightly smaller of the two at other times feeding the larger one with Norway Lemmings *Lemmus lemmus*.

The male Gyr first flushed the prey and chased it about 20 m up the mountain slope. The Ptarmigan then turned abruptly in an attempt to shake off its pursuer and to gain more speed by flying down the slope. The falcon lost some ground but followed. The female Gyr now joined in from below, forcing the Ptarmigan to alter its course once again; she nearly caught the grouse at this stage. The male took over again, and by this time the Ptarmigan had lost so much speed by the enforced turns that the male hit it. A cloud of white feathers spread in the wind like a puff of smoke, showing that the prey had been hit by sharp claws. A second later the female caught the Ptarmigan, and both fell to the ground, where the female started to pluck the prey. The male alighted close by, but was not allowed to share the meal until towards the very end.

I made similar observations when studying a breeding pair of Saker Falcons *F. cherrug* in the Hortobágy area of Hungary in June 1996. I spent a couple of days near the nest, which contained four young that were largely white and were estimated to be less than half-grown. The nest was situated on a pylon in an area of open agricultural fields with a few scattered copses or small woods.

I observed five hunts by the Sakers, four of which were concluded, the fifth being interrupted early on when the intended prey apparently did not behave as expected. All five hunts started with both parents soaring higher and higher in the immediate vicinity of the nest. When a suitable prey was sighted, one of the falcons (apparently invariably the male) started to fly actively towards it, or towards a spot where, presumably, it anticipated meeting it, the other falcon following suit 25-100 m behind and sometimes lower down and along a slightly different path. These approach flights could cover any distance between 500 m and 2-3 km. When in the preferred position well above the prey, which on four occasions was a Feral Pigeon *Columba livia* and on the fifth (interrupted) was presumed to be a Black-headed Gull *Larus ridibundus*, the leading falcon stooped steeply down towards the prey; each time, the latter escaped the first attack and fled towards the nearest copse. When the first falcon had missed, it immediately 'towered', making use of residual speed to get once again above the fleeing pigeon. At this point, the other falcon joined in and tried to prevent the prey from reaching cover, both falcons then taking turns in diving at and chasing it. Two pigeons managed to reach a copse, apparently the only safe escape, whereas the other two were caught in the air after about five stoops by the falcons. The pigeons were killed on the ground, one of them only 100 m from the falcons' nest. The pigeons proved too heavy for the Saker to carry up to the nest; instead, they were largely consumed on the ground, and the falcon chicks received only scraps.

The pair-hunting technique of the Sakers thus seems to be similar to that used by the Gyr Falcons, although, unlike the latter, and presumably because of differences in prey taken and in habitat topography, the Sakers frequently soared, and often at considerable altitude (500 m or above). Contrary to general descriptions of the Saker's hunting methods, these birds practised very steep and spectacular stoops of about 100 m or more, just like Peregrine Falcons *F. peregrinus*. Further, the Sakers did not avoid hunting near their own nest, in contrast to what is often claimed for most raptor species.

The only mention of pair-hunting by falcons that I have found is the brief statement in Glutz von Blotzheim *et al.* (1971, p. 873), under Gyr Falcon: 'as with other large falcons, two birds frequently hunt together'. This behaviour is, therefore, known but, surprisingly, there is no description of how such

hunts are performed, and the pair-hunting strategy is not even mentioned in *BWP* or in monographs on falcons.

Finally, could this hunting practice explain why the largest falcons, such as the Gyr and the Saker, have a somewhat less pronounced sexual size dimorphism than do some slightly or markedly smaller, solitary-hunting species such as the Peregrine and the Merlin *F. columbarius*? It is probably more difficult to practise successful pair-hunting if the sexes are greatly dissimilar in size than if they are more similar.

As a postscript, and after I submitted this note (in May 1997), it has come to my notice that a thorough study of pair-hunting by Saker Falcons in Kazakhstan has been published by Pfeffer (1994). This demonstrated that success rates achieved when pair-hunting were nearly nine times higher than those of falcons hunting alone.

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References

Cramp, S., & Simmons, K. E. L. (eds.) 1980. *The Birds of the Western Palearctic*. vol. 2. Oxford.

Glutz von Blotzheim, U. N., Bauer, K. M., & Bezzel, E. (eds.) 1971. *Handbuch der Vögel Mitteleuropas*. vol. 4. Frankfurt am Main.

Pfeffer, R. J. 1994. Some aspects of feeding behaviour of Saker Falcon. *Selevinia* 2 (3): 85-89.

Rarities Committee news

Night Heron, American Wigeon and Rosy Starling to be removed from BBRC list

At this year's Annual General Meeting of the British Birds Rarities Committee (BBRC), held on 10th March, it was decided that, as from 1st January 2002, records of the following three species will no longer be considered by the Committee.

- Night Heron *Nycticorax nycticorax*
- American Wigeon *Anas americana*
- Rosy Starling *Sturnus roseus*

All three species satisfy the statistical requirements for removal from the BBRC list: i.e. more than 150 individuals have occurred during the past decade, with at least ten recorded in no fewer than eight of those years. For the first two species, the length of time over which many individuals stay means that they appear to be even more common than this (in fact, the Committee also debated whether we should use incidence or prevalence in our statistical consideration).

Night Heron is a relatively easy bird to identify in all plumages, and a relevant article has already appeared in *British Birds* (Lansdown 1991). The question of this species possibly escaping from collections known to contain free-flying individuals has diminished, since there seems to be no discernible pattern linking its occurrence with known captive colonies.

American Wigeon has not been without controversy regarding its escape potential, and there are still the problems of identifying females and of separating hybrids from the genuine article. County records committees already deal admirably with difficult issues (for example, Reed *Acrocephalus scirpaceus* and Marsh Warblers *A. palustris*), and we have little doubt that they will tread an appropriately rigorous line with this potentially difficult species.

The identification of Rosy Starling is rarely problematic, even though this is a species with which observers may be less familiar than they are with the other two and, previously, there has been confusion with leucistic Common Starling *S. vulgaris* and other, exotic species of starling.

BBRC will still be happy to help county committees with these and other species should they require it. Articles covering all identification issues relating to the last two species will be published to coincide with their removal from the BBRC list.

Reference

Lansdown, P. 1991. Identification pitfalls and assessment problems 10. Night Heron. *Brit. Birds* 84: 145-148.

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Secretary: M. J. Rogers, 2 Churchtown Cottages, Towednack, St Ives, Cornwall TR26 3AZ

Letters

House Crows set to take over

It is strange that there has been such concern over the politically incorrect miscegenation of the Oxyurae in Europe (*Brit. Birds* 93: 2-3, 394-396, 500-504; 94: 149), yet the arrival of another asylum-seeker, the House Crow, inappropriately named *Corvus splendens*, has been acknowledged with quiet complacency. Doubtless hitch-hiking on ships, this species was first long-overlooked in Ireland (*Irish Birds* 6: 427-430), and then found breeding in the Netherlands, where there were still four at the Hook of Holland, with another at Hoorn, last autumn (*Brit. Birds* 93: 424; *Birding World* 14: 41). On past form, it may now expand rapidly, so, if some people are already worried by a resurgence in our own Carrion Crows *C. corone*, they may now have even more cause for concern, since the Genghis Khan of the bird world may soon be here, too. Perhaps it ought to be nipped in the bud while there is still time, instead of being welcomed with cameras and binoculars?

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The Unst Blyth's Reed Warbler

Having served on the British Birds Rarities Committee, I know only too well how difficult it can be to adjudicate on records of relatively plain, featureless species. Surprisingly, this may be even more difficult when the record involves a bird that has been trapped, when its subtle 'jizz' may be completely lost. There have been numerous examples, quite understandably, of ringers making erroneous identifications, even allocating birds to the wrong genus. I can, therefore, sympathise with my good friend Colin Bradshaw's difficult task of presenting the Committee's findings with regard to the purported Blyth's Reed Warbler *Acrocephalus dumetorum* on Unst, Shetland, in September 1997 (*Brit. Birds* 94: 236-245).

I shall first deal with the wing formula. While the individual concerned does not have a classic wing formula for Blyth's Reed Warbler, what it does have is perfectly normal for that species, particularly since Svensson (1992) indicates that first-years may have an ill-defined notch on P3, weaker emargination on P4 and no emargination on P5. Of greatest significance is the fact that the primary projection of 13 mm is clearly outside the range for Reed Warbler *A. scirpaceus*, which Svensson gives as 15.0-19.0 mm (compared with 11.5-16.0 mm for Blyth's Reed). In addition, the Unst warbler showed a notch on P3, which is typical of Blyth's Reed but not typical of Reed.

What I find frustrating about this record is that the photographs showed the bird as being much browner than it actually was. In plates 132 and 133, taken by MGP, it looks remarkably brown and is so different in tone from its appearance in plates 134-136, taken by Wendy Dickson, that one could be forgiven for thinking that different birds, or even different species, were involved. This problem was then compounded when the electronic images sent to Hannu Jännes (HJ) proved to be even more 'red-toned' than the originals, putting HJ in the unenviable position of having to assess a record on the basis of inaccurate evidence. It was hardly surprising, therefore, that he concluded that the bird was too brown and, in certain areas, too rufous for Blyth's Reed. He describes the rump, lower mantle and uppertail-coverts as 'rather strong rufous' and the flanks as 'too rufous'. This is simply not correct. The bird was *not* rufous in those areas, as independently confirmed by MGP's in-the-hand and field descriptions, and by the field observations of Mark Ponsford and myself. I might also add that Mark and I never had even the slightest difficulty in separating the two birds (this individual and a Reed Warbler) in the field.

I cannot agree with HJ's comments that the bill shape is wrong. The *fine-tipped* bill is perfectly normal for Blyth's Reed, and this, together with the head-shape differences

mentioned by MGP, produced the rather spiky appearance of the bill which is characteristic of Blyth's Reed (see, for example, photographs in Pennington 1998 and Golley & Millington 1996). Much is also made of the dark centres to the remiges. As with the colour reproduction, this is undoubtedly due to photographic effects, since Wendy Dickson's plate 134 shows both the warbler in question and the Reed Warbler ostensibly lacking dark centres to the tertials. I would draw readers' attention to plates 1-4 in Golley & Millington (1996), which show dark centres on a Blyth's Reed Warbler in Norfolk in September 1996 (a record accepted by BBRC, *Brit. Birds* 90: 499; plate 171, below). This may also, to some extent, be due to photographic effects, since that individual also looks very brown in some photographs, while in others it does not.

What I find particularly baffling about the evaluation of this record is that, apart from passing references by HJ, no mention is made of the age of the bird. This is fundamental to the identification of Blyth's Reed Warbler in autumn. Adults of both Reed and Blyth's Reed Warblers have a complete moult in their winter quarters and therefore show relatively worn primaries in autumn. The fresh primaries of the Unst bird clearly indicate that it is a first-winter individual. The separation of first-winter Reed and Blyth's Reed is much more straightforward as a consequence of their differing plumage tones. As I mentioned in my field notes, there are approximately 800 pairs of Reed Warblers breeding at my local 'patch', at Chew Valley Lake, Somerset, with a post-breeding population of perhaps 3,500 individuals. To say that I am familiar with the species is an understatement! First-winter Reed Warblers in September are in fresh plumage, which is extremely warm in tone, particularly on the rump and tail, which are rather rufous, and also on the flanks and undertail-coverts, which are strikingly buff. The Unst warbler just did not exhibit this coloration. It was rather a cold earth-brown (MGP) or cold grey-brown (KEV) above, while the underparts were cold creamy-buff, slightly warmer on the flanks (MGP), or buffy-white, with *white* undertail-coverts showing only a slight but distinct buff tint in a close view (KEV). This coloration is not compatible with a *first-winter* Reed Warbler (but worn adult Reed Warblers may be much more similar).

To these points I would add five others. First, the Unst warbler showed distinct differences from Reed Warbler in jizz and structure, independently evaluated by both MGP



George Reszeter

171. Blyth's Reed Warbler *Acrocephalus dumetorum*, Warham Greens, Norfolk, September 1996.



Mike Pennington

172. Unidentified *Acrocephalus* warbler, Norwick, Unst, Shetland, September 1997.



Kevin Osborn

173. Blyth's Reed Warbler *Acrocephalus dumetorum*, Fair Isle, Shetland, September 1987.

and myself. Secondly, its facial pattern, with a weak dark loral line and a prominent cream eye-ring, was typical of Blyth's Reed Warbler. Thirdly, its legs were grey, contrasting with the yellower soles, again independently assessed by MGP and myself. Fourthly, its call was described as a short 'tuc', whereas Reed Warbler gives rather a soft 'chrer'. Finally, it *habitually* cocked its tail when feeding; Reed Warblers can, of course, raise the tail, but they do not do so persistently over a long period of time while foraging.

Golley & Millington (1996) clearly illustrated that Blyth's Reed Warbler is identifiable in the field. My limited experience of the species in Britain and Finland confirms that, *provided that you know Reed Warbler very well*, the field identification of Blyth's Reed Warbler is not so difficult as is generally supposed, so long as the bird is seen well over a reasonable length of time. While one has to be philosophical about the rejection of a record, I feel that, in this particular case, the Committee has prevaricated to the point where it 'cannot see the wood for the trees'. One has to conclude that the BBRC's rejection of the Unst record is tantamount to its saying that the species is not identifiable in the field. This is particularly disappointing at a time when the clouds surrounding its field identification are at last beginning to dissipate.

Finally, for readers interested in this record, I would draw attention to two photographs published in Pennington (1998). One shows the Unst warbler in the hand, and the other, immediately beneath it, depicts an accepted first-winter Blyth's Reed Warbler (which, incidentally, shows eight visible primaries) trapped on Fair Isle, Shetland, in September 1987 (plates 172 & 173). The two birds are, to all intents and purposes, identical. I would defy even the most expert birder to conclude that the two photographs show different species!

References

Golley, M., & Millington, R. 1996. Identification of Blyth's Reed Warbler in the field. *Birding World* 9: 351-353.

Pennington, M. 1998. Blyth's Reed Warbler on Unst, 16th September-1st October, and summary of previous Scottish records. *Birding Scotland* 1: 7-13.

Svensson, L. 1992. *Identification Guide to European Passerines*. 4th edn. Stockholm.

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I should like to thank Keith Vinicombe (KEV) for his spirited defence (above) of my record of Blyth's Reed Warbler *Acrocephalus dumetorum* on Unst, Shetland, in September 1997 (*Brit. Birds* 94: 236-245). As the finder and identifier of the bird, I may have been perceived as having an axe to grind had I vigorously defended the identification, but KEV has put forward a strong argument, and one which, of course, I support. I agreed to the

publication of the details of this record in *BB*, since I hoped that it would stimulate debate on several aspects of the recording process. Having read the text of the article, however, I should like to emphasise three points associated with this case.

First, I am fully aware that, in some instances, observers may record what they expect to see, but I remain quite convinced that none of the photographs of the Unst warbler depicts the bird's coloration accurately, and this is supported by independent field descriptions from KEV and myself. In addition, all others who observed the two *Acrocephalus* warblers (the bird in question, plus a Reed Warbler *A. scirpaceus*) together in the hand, including individuals unconcerned with the minutiae of *Acrocephalus* identification, were able to separate the two by colour alone, something which is just not evident from the photographs.

Secondly, the discussion of this bird's identity involved detailed analysis of the biometrics. I feel that it should be re-emphasised that, even under ideal conditions, such as those of an observatory laboratory, regular and constant measurement to the nearest 0.5 mm is just not possible. As KEV points out, the biometrics may not be typical for Blyth's Reed Warbler but, equally, they do not exclude that species, either. Moreover, the biometrics and wing formula recorded would belong only to a very unusual Reed Warbler. It should also be stressed that counting exposed primary tips on a bird in the hand, which is not in a natural position, is at best ill-advised.

Finally, I feel rather strongly that this record is being used to prove to observers that Blyth's Reed Warbler is very difficult to identify. I agree with this sentiment, and even wrote my description to try to help support this theory; but perhaps I shall not make that mistake again!

Mike Pennington
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I read the letters from both Keith Vinicombe and Mike Pennington (above) with a great deal of interest, and have discussed the following response with several members of the BBRC. There are points on which we would agree with them, and points over which we would take issue. We hold both Keith and Mike in very high regard, take a great deal of notice of their opinions, and feel that there may be a lot of truth in what they write. In essence, however, BBRC considers that some species are sufficiently difficult to identify that only the most rigorous approach is appropriate. Examples of these are Collared Flycatcher *Ficedula albicollis* in autumn, and Short-toed Treecreeper *Certhia brachydactyla*. To these BBRC would undoubtedly add Blyth's Reed Warbler *Acrocephalus dumetorum*. We agree with Keith that ringers sometimes miss out on the important 'jizz' of a species, but we are also aware of numerous occasions when ringers have reidentified a bird which many observers have been happy to name from its 'jizz' as a different species. We are less convinced about the value of experience that is out of context. In the ochre-coloured reedbeds of southern England, Reed Warblers are undoubtedly very warm-coloured and do not cock their tail, but is this the case for individuals in isolated green bushes in the windswept northern isles? We also believe that migrants originating from populations farther afield than the UK mainland may well appear more variable than a cohort of birds reared in the same place at the same time. To substantiate our beliefs, we could show that there is a history of observers making mistakes with familiar species seen out of context, particularly *Acrocephalus* warblers, and we need to be quite sure that this was not the case here.

I should like to deal with some of the more specific comments, beginning with the wing structure. First-year Blyth's Reed Warbler *may* show just a weak emargination on P4, but this is quite rare, and is more likely on a first-year Reed Warbler *A. scirpaceus*. The notch on P3 is equally variable and cannot be used as an absolute feature. This leaves the primary projection, measured as 13 mm (although, as Mike Pennington admits on page 245, 'taking biometrics on a live bird is not as exact as some people think'). Looking at the images, it is difficult to equate the primary projection with the bill length (to feathering), measured as 12.5 mm. We understand that the image of the bird

may be foreshortened, but still the primary projection looks longer than the bill. Brian Small, who had not previously seen the details of this record, attempted to calculate the primary projection of the Unst warbler by using a more accurate method. The distance from the wing-point to P6 is 6 mm, and from careful examination of plate 133 it is apparent that the primary projection is at least two-and-a-half times that distance. This gives 15 mm (or more) from the wing-point to the tip of the longest tertial (S7), and perhaps nearer 17 mm to the tip of the outermost secondary (S1). This is outside the range for Blyth's Reed Warbler given by Svensson (1992), and clearly longer than the 13 mm stated. The figures for primary projection given by Svensson are measured from the tip of S1, which is often shorter than S7. Consequently, the 'actual primary projection' (as seen in the field) may be slightly shorter than Svensson's figures indicate.

We have some sympathy with the views on the colour discrepancies between the bird in life and its appearance in the photos, and it was, perhaps, unfortunate that the comments by Hannu Jännes were based largely on the reproduced images, even though we were grateful for his expert input. We have to take the observers' word that there were no 'rufous' tones on the putative Blyth's Reed, but it does seem odd to us that an obvious difference in colour between this and the Reed Warbler was not maintained when the two were photographed side by side since, surely, both had been subject to the same shift in colour balance when the images were processed? While autumn Blyth's Reed Warbler can clearly be quite rusty-toned, the wing feathers of the Unst warbler lack the characteristic uniform look of that species. Keith also described the colour of this bird as 'cold grey-brown'. This is not BBRC's impression of the colour of Blyth's Reed Warbler. We have examined many first-year Blyth's Reed Warblers at the Natural History Museum, Tring, and they are usually a fairly rich olive-brown with, on some, warmer tones to the rump, but neither cold nor grey. We also differ in our view of how useful head-and-bill shape may be in identifying Blyth's Reed Warbler. We feel that, while Blyth's Reed often has an almost *Hippolais*-like head-and-bill shape, there is so much overlap between it and Reed Warbler that this is of limited value. Moreover, our general impression of the published photographs is that we see little difference in colour, head-and-bill shape, facial pattern (allowing for the missing feathers), and wing shape between the disputed individual and the undisputed Reed Warbler.

Finally, we do not believe that the call supports the identification as Blyth's Reed Warbler. The 'tuc' call is somewhat ambiguous; it is not right for either Blyth's Reed or Reed Warbler, although there seems to be a growing body of opinion that Reed Warblers give only a slurred 'churr', which is not the case.

Keith feels that Blyth's Reed Warbler is identifiable in the field, and that, provided that you know Reed Warbler very well, the field identification is not so difficult as might be supposed, so long as the bird is seen well over a period of time. We would agree with this, and do not claim that it cannot be done, but simply that it requires excellent views and a very cautious approach. As Keith points out in his own notes, however, this was not the case here. He describes a 'very frustrating bird, with numerous brief views so that it was never possible to see the whole bird at once. It was very wary and difficult to approach.' Given these circumstances, biometrics that were intermediate, a set of photographs that, in the collective view of BBRC, failed to convey any obvious difference between the claimed Blyth's Reed and the accompanying Reed Warbler, the acknowledged variation in the colour tones of Reed Warbler, and the known occurrence of hybrids in Scandinavian populations, BBRC still feels that a cautious approach and a non-acceptance of this record are appropriate. As Brian Small, who joined BBRC after this record was assessed, says, 'I believe that BBRC, on the basis of what is presented by Keith and in *BB*, has assessed the facts carefully and with caution. Some may criticise our cautious approach, but there you are: you are damned if you do and damned if you don't!'

Prof. Colin Bradshaw
9 Tynemouth Place, Tynemouth, Tyne & Wear NE30 4BJ

Reviews

HANDBOOK OF THE BIRDS OF THE WORLD. VOL. 6. MOUSEBIRDS TO HORNBILLS

Edited by Josep del Hoyo, Andrew Elliott & Jordi Sargatal.
Lynx Edicions, Barcelona, 2001. 589 pages; 44 colour plates; numerous photographs; 258 species accounts with maps.
ISBN 84-87334-30X.
Hardback, £110.00.

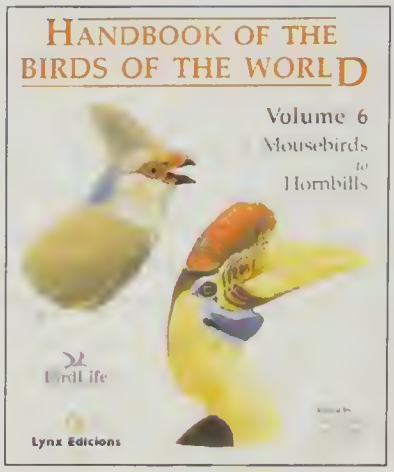
Every time I see a new volume of the *Handbook of the Birds of the World* I continue to be amazed at both its high standard and the fact that delivery is just about on time. When the first volume was published, in 1992, the schedule was to publish a volume every 18 months, so the members of the editorial team have proved to be pretty effective taskmasters to their authors, artists and photographers.

This tome is the penultimate one of the non-passerines; volume 7 will complete them. Then, if the rigorous adherence to deadlines continues, we should see this seminal work completed by 2013, for there is every indication that *HBW* will now stretch to 15 volumes, in order not to compromise on the standard that has been set.

The change from the original plan (that the work would be completed in 12 volumes) has clearly caused the editors a degree of angst, and in an overlong introduction they thank their readers for 'bearing with us'. This is surely not necessary. Anyone embarking on the most ambitious publishing project ever attempted in ornithology, and delivering such an excellent product, does not need to apologise that the planning schedule has gone a little awry (not helped any by continuing taxonomic changes along the way).

This volume covers the mousebirds (Coliidae), trogons (Trogonidae), kingfishers (Alcedinidae), todies (Todidae), motmots (Momotidae), bee-eaters (Meropidae), rollers (Coraciidae), ground-rollers (Brachypteraciidae), cuckoo-rollers (Leptosomidae), hoopoes (Upupidae), woodhoopoes (Phoeniculidae) and hornbills (Bucerotidae), with nearly half the book being devoted to the kingfishers. There is a long and detailed Foreword entitled Avian Bioacoustics, which is a tribute to Luis Baptista, who died in 2000 while writing the draft for it. This critical account will tell you all you need to know about a much-misunderstood avenue of ornithology, and its history and achievements.

For the main text, the pattern of the previous volumes is repeated. Each family has a long introduction covering systematics, morphological aspects, habitat, general habits, voice, food and feeding, breeding, movements, relationship with man, and status and conservation. Then there is a concise text on each species, covering the above points more specifically. In his assessment of volume 1 (*Brit. Birds* 86: 190-191), the reviewer was rather disappointed with these texts, and targeted the descriptive notes for mild criticism. Since then there has been a marked improvement, and now they seriously rival the accounts in many regionally dedicated field guides. The whole book is lavishly (but not excessively) illustrated with some of the best photos you will find today and, of course, there are the species plates, 44 in all, in field-guide-type layouts. Incidentally, I can see these being published in their own right as a spin-off product of the series. And one has confidence in the authority of a book in which nearly 6,000 references are cited.



To end on a personal note, I am pleased to see that the co-operation between Lynx Edicions and BirdLife International continues with this volume. This has undoubtedly contributed towards making the conservation sections as useful and up to date as they are. In my own conservation activities – largely in the Middle East – I recommend to all organisations and institutions *Threatened Birds of the World* (another Lynx–BirdLife venture) and *HBW* as two essential references on birds and bird conservation. But I do warn them that they may have to wait over ten years for the luckless Corn Bunting *Miliaria calandra* to appear.

Richard Porter

SHORT REVIEW

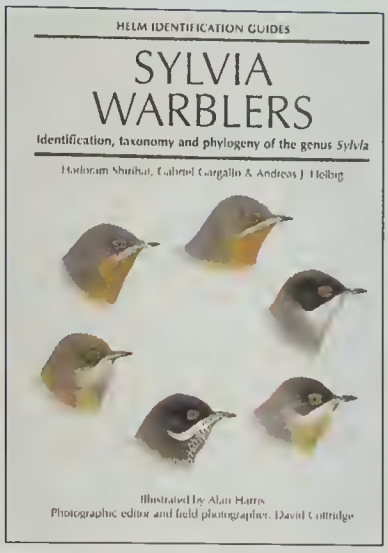
Blyth Birds

By Steve Holliday. (Steve Holliday, Kingston-upon-Hull, 2000. 161 pages; eight colour pictures; numerous figures. Softback, £8.00.)
This book contains a wealth of information about Blyth (Northumberland), its birds, and its birders. Species accounts, which are detailed and refreshingly varied, summarise observations from the past decade, while additional chapters on migrants, seabirds, gulls and waders provide further insights into the area's avifauna, and the personalities involved. The overall result is an interesting portrayal of contemporary Blyth birding.

Jane Reid

SYLVIA WARBLERS:
IDENTIFICATION, TAXONOMY AND PHYLOGENY OF THE GENUS *SYLVIA*

By Hadoram Shirihai, Gabriel Gargallo & Andreas J. Helbig. Illustrated by Alan Harris. Photographic editor and field photographer David Cottridge. Christopher Helm, A & C Black, London, 2001. 576 pages; 20 colour plates; 97 photographic plates; maps. ISBN 0-7136-3984-9. Hardback, £60.00.



This is the latest volume in the well-established and popular series of Helm Identification Guides, and in my view ranks among the very best. The '*Sylvia* projeet' commeneed in 1984, and this book brings together mueh new information on a group that ean still provide a ehallenge to even the most accomplished birder.

The authors have come up with a well-eonsidered and 'modern' version of the Biologieal Speeies Coneept, which is refreshing given the eurrent fashion of 'split first and think later (if at all)' embraced so wholeheartedly by some of the populist birding press. This new interpretation of the BSC foeuses on the concept of an intermediate speeies ('allospeeies'), whieh indieates a very elose relationship between taxa that may now be partially or eompletely reproductively isolated. The eonsequenee of this is that Marmora's Warbler *S. sarda*, Desert Warbler *S. nana* and Orphean Warbler *S. hortensis* are eaeh split into two (allo)speeies, representing Mediterranean and Balearie, Asian and African, and eastern and western forms, respeetively. The treatment of the Lesser Whitethroat *S. curruca* eomplex differs from any that has gone before, with four speeies being reeognised, namely 'Lesser Whitethroat' (ineluding two subspeeies, nominate *curruca* and *halimodendri*), 'Margelanie Lesser Whitethroat' (*S. margelanica*), 'Desert Lesser Whitethroat' (*S. minula*) and 'Mountain Lesser Whitethroat' (*S. althaea*). It is interesting to notc that the Siberian form, *blythi*, is not even afforded subspecies status, in recognition of the fact that the differenees between it and the nominate form of *S. curruca* are so slight. There is an aeknowledgment, however, that mueh work has yet to bc done, especially with regard to song and moleeular genetics. Furthermore, therc are still some taxa, for example the three forms of Subalpine Warbler *S. cantillans*, whieh are recognised as subspeeies, although they are geographieally distinet and show some differenees in male plumage and voealisations, and may perhaps, as the authors point out, merit the status of 'allospeeies'.

The scctions on phylogeny, biogcography and migration in the introductory ehapters are both informative and fascinating. I was amazed to learn that the partially migratory Blaekeap *S. atricapilla* population in southern Franee has the potential to evolve fully migratory behaviour, or to beeome totally sedentary, in just six to ten generations.

First and foremost, howcver, this is an identification guide, and the speeies accounts themselves are truly awesome. Those eoneerning the Palearctie species extend to between 20 and 40 pages. Each ineludes a superb colour plate by Alan Harris, and between 20 and 30 pin-sharp colour photographs of birds, both in the field and in the hand, depieting all ages and most subspecies. The Lesser Whitethroat complex alone is illustrated with 33 photographs. The distribution maps are among the best I have ever seen. The handful of African speeies, formerly in the genus *Parisoma*, reeeive a briefer treatment. As well as more in-depth sections, there is also a useful 'quick-fix' summary box on identifieation, followed by an aecount of the major pitfalls. Ringers, too, will find the book indispensablc. Each species has a section dedieated to identification in the hand, with details on ageing and sexing, useful and easy-to-understand diagrams on moult patterns, and a summary of all published biometric data for each taxon. While there is a huge amount of original information presented here, the book also gives a realistic assessment of how diffieult identification of *Sylvia* warblers ean be. This is especially apparent in the discussion of geographical variation, which suggcsts that some individuals are not sufficiently distinet to be safely identifiable to subspeeies level, which is a timely warning to those who would have us believe that nearly everything is identifiable almost all the time.

This is a thorough and seholarly work, and one which those involved in its production can be justifiably proud of. At £60, the price is 50% higher than that of prcvious titles in the series, but even at this priee I have no hesitation in reeommending it. I hope that companion volumes on *Hippolais*, *Acrocephalus* and *Locustella* warblers, and *Phylloscopus* warblers are in the pipcline and that they can match the standard set by this superb book.

Paul Harvey

Recent reports

Compiled by Barry Nightingale and Anthony McGeehan

This summary of unchecked reports covers the period end April to early June 2001.



Hugh Harrop

174. Eurasian Scops Owl *Otus scops*, Cunningsburgh, Shetland, May 2001.

Squacco Heron *Ardeola ralloides* Lamorna Cove (Cornwall), 25th May. **Cattle Egret** *Bubulcus ibis* St Agnes (Scilly), 16th-17th May, with another on St Martin's (Scilly), 16th-17th May; one of the two on St Mary's (Scilly), 17th-19th May, with the other on Tresco (Scilly), 18th-19th May (first Scilly records). **Great White Egret** *Egretta alba* Two over Snape (Suffolk), 18th May; Caerlaverock (Dumfries & Galloway), 19th-20th May; Pollardstown Fen (Co. Kildare), 4th June. **Collared Pratincole** *Glareola pratincola* Sidlesham Ferry (West Sussex), 26th-31st May. **American Golden Plover** *Pluvialis dominica* Earls Barton (Northamptonshire), at least 15th-17th May; Blacktoft Sands (East Yorkshire), 25th May. **Great Snipe** *Gallinago media* Fair Isle (Shetland), 29th May. **Short-billed Dowitcher** *Limnodromus griseus* One still present at Swords Estuary (Co. Dublin), until at least 7th May (from 2000). **Wilson's Phalarope** *Phalaropus tricolor* Undisclosed site, Essex, 18th-19th May. **Yellow-legged Gull** *Larus cachinnans* One of the race *michahellis*, Glencolmcille (Co. Donegal), 30th May. **Caspian Tern** *Sterna caspia* At sea, about 5 km south of Kinsale (Co. Cork), 6th May; Willen Lake (Buckinghamshire), 11th May. **White-winged Black Tern** *Chlidonias leucopterus* Kilconquhar Loch (Fife), 14th-16th May; Saltholme Pool (Cleveland), 4th-7th June. **Eurasian Scops Owl** *Otus scops* Cunningsburgh (Shetland), 14th May. **Little Swift** *Apus affinis* Netherfield (Nottinghamshire), 26th-29th May. **European Bee-eater** *Merops apiaster* In total, at least 23: four, Land's End (Cornwall), 12th May, then Kelynack Valley (Cornwall) on 12th May and again 14th May; Pegwell Bay (Kent), 15th May; Holyhead (Anglesey), 16th May; Cley (Norfolk), 16th May; Great Yarmouth (Norfolk), 16th May; North Warren RSPB Reserve (Suffolk), 18th May; Spurn (East Yorkshire), 20th May and 5th June, and (presumed same) Kilnsea (East Yorkshire), 1st June; Holme (Norfolk), 21st May; North Wootton (Norfolk), 22nd May, probably same near Kings Lynn (Norfolk), 23rd May; Portland (Dorset), 24th May; Capel-le-Ferne (Kent), 25th May; St Mary's, 25th May; Dunwich Heath (Suffolk), 29th May; Winterton (Norfolk), 30th May; Sizewell (Suffolk), 30th May;



Gary Bellingham

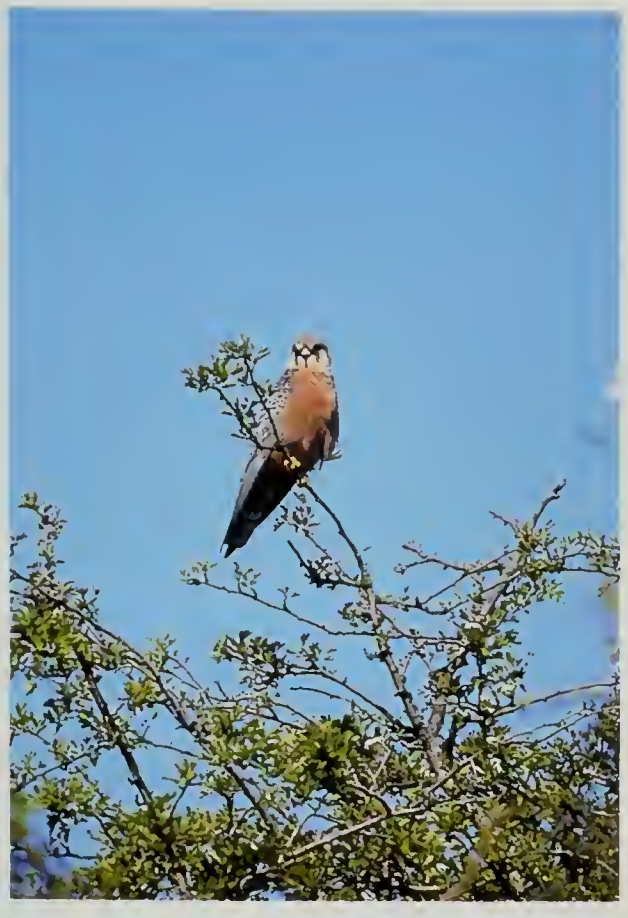
175. Yellow Wagtail *Motacilla flava* of the race *thunbergi* ('Grey-headed Wagtail'), Rutland Water, Rutland, May 2001.

© *British Birds* 94: 298-300, June 2001



George Reszeter

176. Little Swift *Apus affinis*, Netherfield, Nottinghamshire, May 2001.



Bill Baston

177. Red-footed Falcon *Falco vespertinus*, Wicken Fen, Cambridgeshire, May 2001.

Naze (Essex), 31st May; St Margaret's-at-Cliffe (Kent), 31st May to 1st June; two, Walberswick, then Orford (both Suffolk), 3rd June; Rye Harbour (East Sussex), 4th June; Kirkby (Merseyside), 4th June. **Red-rumped Swallow** *Hirundo daurica* Porthgwarra (Cornwall), 10th May; Land's End, 11th-12th May; Isle of May (Fife), 18th May; two, Spurn, 19th May; Ouse Washes RSPB Reserve (Cambridgeshire), 20th May; St Mary's, 21st-22nd May. **Red-throated Pipit** *Anthus cervinus* Tresco, 11th May; Filey (North Yorkshire), 13th May; Whitburn (Co. Durham), 13th May; Nanjizal (Cornwall), 22nd May. **Citrine Wagtail** *Motacilla citreola* Land's End, 15th-16th May; Blakeney Point (Norfolk), 16th May. **Thrush Nightingale** *Luscinia luscinia* Spurn, 12th-13th May; Gibraltar Point (Lincolnshire), 15th May. **Great Reed Warbler** *Acrocephalus arundinaceus* Coatham Marsh (Cleveland), 15th-16th May; Welland Bank Quarry (Lincolnshire), 22nd May. **Marmora's Warbler** *Sylvia sarda* Sizewell, 29th May. **Subalpine Warbler** *Sylvia cantillans* Land's End, 13th May; Birsay (Orkney), 18th-21st May; Fair Isle, 22nd-30th May; Spurn, 23rd May; Fetlar (Shetland), 23rd May; Blakeney Point, 24th-25th May; Saltee Island (Co. Wexford), 27th-29th May. **Sardinian Warbler** *Sylvia melanocephala* Bacton (Norfolk), 20th May. **Western Bonelli's Warbler** *Phylloscopus bonelli* Bardsey (Gwynedd), 11th-19th May. **Woodchat Shrike** *Lanius senator* Two, Achill Island (Co. Mayo), c. 27th



Mike Richardson

178. Thrush Nightingale *Luscinia luscinia*, Spurn, East Yorkshire, May 2001.



Dave Nye

179. Savi's Warbler *Locustella luscinioides*, Thornham, Norfolk, May 2001.

April; St Martin's, 11th May; Marazion Marsh (Cornwall), 30th May. **Rosy Starling** *Sturnus roseus* Three, St Mary's, 5th June, with at least one there and one on Bryher (Scilly), both 6th June; Carnoustie (Grampian), 7th June. **Arctic Redpoll** *Carduelis hornemanni* Fair Isle, 13th-15th May. **Black-headed Bunting** *Emberiza melanocephala* South Stack (Anglesey), 18th-20th May.

Daily Log: April

April is the peak spring month for passerine migration at many bird observatories in Britain, when thrushes, warblers and finches typically form an important component of the daily log. At the start of the month, Fair Isle (Shetland) still had large numbers of thrushes remaining on the island, following a large fall in late March, with 750 Blackbirds *Turdus merula*, 230 Fieldfares *T. pilaris*, 320 Song Thrushes *T. philomelos* and 270 Redwings *T. iliacus* there on 1st. 367 Redwings, at Gibraltar Point (Lincolnshire) on 3rd, was the only other thrush record of note until an arrival of Fieldfares in the northern isles at the end of the month, when 1,200 Fieldfares (and 160 Bramblings *Fringilla montifringilla*) were on Fair Isle on 29th.

South- and west-coast sites recorded the heaviest passage of warblers, with the first pulse right at the start of the month, when there were 75 Common Chiffchaffs *Phylloscopus collybita*, 100 Willow Warblers *P. trochilus* and four Firecrests *Regulus ignicapillus* at Portland (Dorset), 100 Common Chiffchaffs, 18 Willow Warblers, 20 Goldcrests *R. regulus* and 20 Firecrests at Dungeness (Kent), and another eight Firecrests at Sandwich Bay (Kent), all on 1st. On 2nd, 204 Willow Warblers were noted on Bardsey (Gwynedd). Portland recorded counts of 100 or more Willow Warblers on a further eight days during the month, with 400 on 27th being the highest. Numbers of this species farther north and east were more modest, with peaks of 42 at Gibraltar Point on 26th, 35 on Walney (Cumbria) on 26th, 30 at Landguard (Suffolk) on 28th, and 15 at Filey (North Yorkshire) on 29th, although 140 were logged at the Calf of Man (Isle of Man) on 25th, with 60 there on 30th. A remarkable arrival on Bardsey at the end of the month takes the prize, however, with the following all recorded on 30th: 98 Grasshopper Warblers *Locustella naevia*, 85 Sedge Warblers *Acrocephalus schoenobaenus*, 31 Common Whitethroats *Sylvia communis*, 84 Blackcaps *S. atricapilla*, 13 Common Chiffchaffs and 465 Willow Warblers. Add to these an Iberian Chiffchaff *P. brehmii* and a Pine Bunting *Emberiza leucocephalos*, and this must have been one of the most exciting day's birdwatching of the year for a few lucky observers.

Many observatories reported movements of finches during April. At Gibraltar Point, Linnets *Carduelis cannabina* moved south in numbers on several days, including 462 on 3rd and 315 on 22nd, while Goldfinches *C. carduelis* reached 123 there on 28th. The large majority of finches move south at this site in spring (the same is true at Spurn, East Yorkshire), and these are presumed to be birds bound for the Continent flying south in search of a shorter crossing of the North Sea. A little farther down the coast, at Holme (Norfolk), there were 200 Linnets on 1st and 100 Goldfinches on 22nd. At Sandwich Bay, Linnet passage was predominantly northwards, with 266 on 12th and a further 210 on 28th. On the west coast, Bardsey also reported large numbers of Linnets, with 300 on 26th and 350 on 30th, while Walney's peak count of the species was 90 on 30th, bettered only by 155 Goldfinches seen there on 3rd.

The above summary of unchecked news was supplied by the Bird Observatories Council's 'grapevine', courtesy of the British Trust for Ornithology

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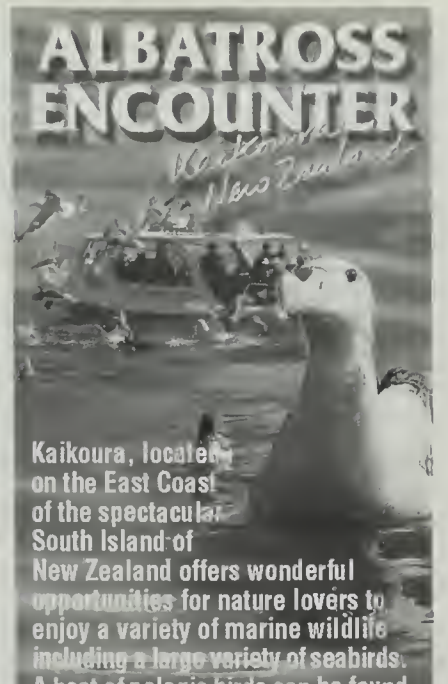
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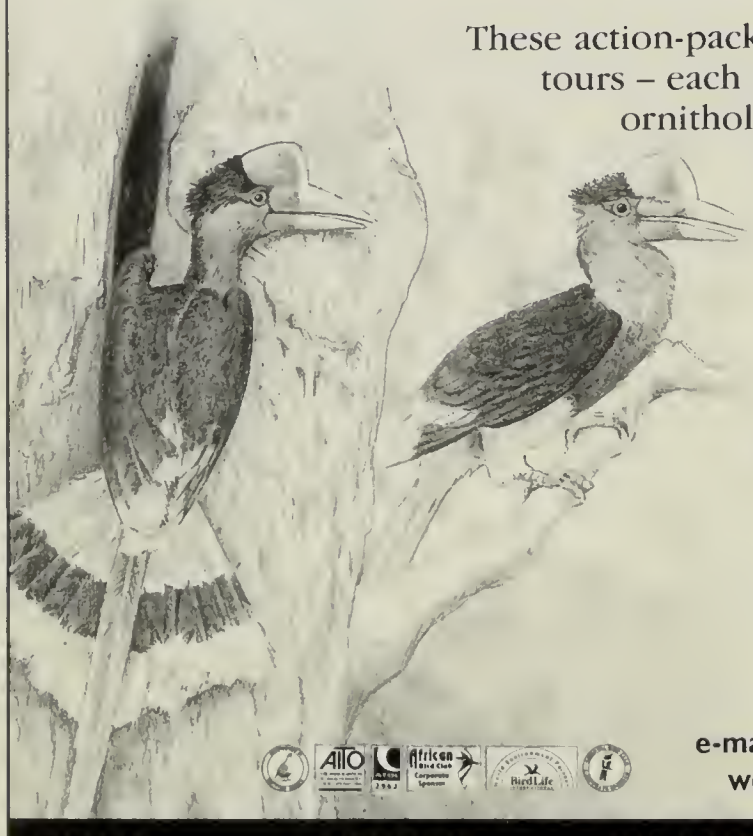
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